PSYCHOLOGY OF DIET & NUTRITION

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THE
Psychology of Diet and Nutrition

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By

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AND

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CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
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Foreword

EVEN though the scientific literatures of diet and psychology have from time to time presented articles on feeding problems and on psychological problems in which food was involved, there has been no guide which might be useful for those who need to use psychological methods in feeding people better—the clinical dietitian, the institutional or industrial meal planner, or the housewife.

The nutritionist or dietitian, and—in her smaller sphere—the housewife know what people should eat and how to prepare food, and all recognize the need for proper feeding methods. The psychiatrist encounters in his practice the result of malnutrition upon mental processes and the effect of mental processes upon eating habits and attitudes; he sees the effect of mental disease, mild and severe, in bringing about feeding problems. This book, a collaboration between a dietitian and a psychiatrist, may therefore provide a guide that will lead to a better understanding of why human beings eat what they do, and what can be done if they do not eat as they should. In addition, the authors hope that physicians who have to prescribe diets will gain something by reading it, and likewise administrators and supervisors in government and industry who are responsible for helping people to be properly fed.

The list of those who have supplied us with ideas and material is too long to permit us to thank each individually, but we are under particular obligation to Dr. Margaret

Mead, Chairman of the Committee on Food Habits of the National Research Council, and to Dr. Robert S. Goodhart, Chief Industrial Feeding Programs Division, Civilian Food Requirements Branch, War Food Administration. There is no doubt that without the stimulation and interest of Miss Frances Stern of the Boston Dispensary, this book would never have been written.

LOWELL S. SELLING
MARY ANNA S. FERRARO

I

The Basic Psychology of Nutrition

WHAT people eat, and how much, depends on what they can get and what they choose. The choice of food, even when there is food enough and variety enough, sometimes causes individuals and whole peoples to be malnourished. Ignorance of what food should be eaten contributes to unwise choice, in many cases, but the psychology of individuals and groups has much to do with wise or unwise selection. Some people who know better eat unwisely; some people who could learn better nevertheless refuse to learn and continue to practice mistaken eating habits.

During the depression of the 1930's, much attention was given to the matter of educating the public concerning nutrition. And today, the government and private agencies are doing all that they can to make people *want* to eat the right thing. Much of their approach is unscientific; but all of the processes used must be considered as attempts to use psychological procedures to improve the diet of our people.

Instead of being discouraged at the limited results of attempting the re-education of our public, we must not forget that vast amounts of energy must be exerted upon a population in order to effect a change in its food habits. Each person knows the foods that he likes, and the mere fact that research workers in food have decided that other foods are good for him does not have very much effect in making him change his ways of eating. The scientific discussion of nutrition has little glamour for him. And just as each individual is hard to approach and

hard to change and hard to improve in the matter of eating, so the whole population represents the sum total of these individual resistances.

Another interesting psychological problem arises from the fact that everyone is so thoroughly experienced in eating as a result of having eaten a good many meals during his lifetime that he considers himself somewhat of an expert. If new ideas are presented to him not entirely in keeping with what he has heard or what he believes to be true from his own experience, he tends to reject them. In addition, he is so preoccupied with his daily activity that he tends to leave to the nonreasoning part of his mind (that is, to habit and to the subconscious) as much of the mere routine of living as he can.

But even if everybody were willing, and able both as to purse and knowledge, to place before his family or himself a perfectly balanced diet for every meal, the problem of adequate nutrition would not be entirely solved. Many a general practitioner today tells an anxious mother what foods should be given an anemic or otherwise ailing child. But often someone must induce the child to eat the spinach or the eggs or drink the quart of milk that has been prescribed. Suppose the patient has said that spinach looks like soggy hay and has remarked that he would rather die than eat another egg or insists that milk is drunk only by sissies?

This problem suggests introducing the professional psychologist into the picture. True, psychological methods have been used that have not been devised by experts or evolved out of science but that are the result of human experience. Grandmothers have skills to teach to their daughters with young children. Even though these rules are not always wholesome, not always wise, they represent basic psychological experience and a certain number are useful. On the other hand, even useful rules are hard to disentangle from superstition and unjustifiable traditional thinking about food.

The trained psychologist is concerned with the problem of how best the patient may be induced to eat needed food with relish. He tries to devise the most suitable methods of placing the food before the patient so that the latter will be benefited not only bodily but also mentally.

Of recent years, the dramatic publicity given to the discoveries concerning the vitamins and other food factors has centered the interest of the public on the nutritionist, almost to the total exclusion of the psychologist. Scientific psychology in reference to eating habits has been largely ignored, whereas scientific nutrition has captured the imagination of the physician and layman alike.

The course of training given to the nutritionist today seldom emphasizes even elementary psychology in relation to food habits. Yet the professional nutritionist needs a much more profound knowledge of psychology—scientific psychology—with special reference to the psychological factors involved in eating.

Many individuals who are permanently undernourished or improperly nourished are "problem" cases. To treat them requires case histories both psychological and nutritional. In the practical application of the science of nutrition to the individual person, many unexpected problems arise which can be solved with certainty and satisfactorily by the scientific psychologist. A patient who does not wish to eat some particular item of prescribed food may present almost insuperable difficulties to the nutritionist who is not trained as a scientific psychologist. Should the patient be trained to eat the article of food? If so, how? Or should he be allowed to use a substitute?

PSYCHODIETETICS

During the war of 1914–18, the problems of feeding people became so acute that a great emphasis was given to research

in nutrition. Much thought was given to the economics of feeding people, including the feeding of whole nations. Some psychologists, shortly after the war, began researches concerning the effects of malnutrition and feeding deficiencies on the children who had gone through the war in countries where food had not been plentiful. The early studies were not conclusive and the subject was studied only sporadically until 1933, when Martin Fritz, psychologist at Iowa State College, began to study the relation between diet and nervous disease. He also was interested in the effect of nutrition on learning processes. Dr. Fritz coined the term "psychodietetics" to cover the area of interrelationship between dietetics and psychology.

A knowledge of psychodietetics is essential for both the psychologist and the nutritionist. It provides ingenious techniques enabling the latter to cope with her problem cases, at the same time giving the former an explanation of many problems of the human personality which otherwise might be inexplicable.

Psychodietetics, while in itself not a science, does provide for the interrelationship of those sciences that have to do with psychology and nutrition. Sociology, psychology, physiology, home economics, biochemistry, and other special fields where the scientist is inclined to remain segregated in his research laboratory are brought together to give practical information to those who can utilize it. Attention, for instance, has been given to the fact that man as a social animal does a great deal of thinking concerning food. He has mental processes that cause him normally to pay more attention to questions of alimentation than to any other single problem which confronts him. On the other hand, there are individuals who ignore completely the question of food unless they are confronted with such a serious problem as an inability to obtain food in sufficient quantity to prevent hunger or unless the only food available to them is distasteful.

Man has a whole series of reactions, of complexes, and of ideas concerning food; as a busy everyday citizen, he is usually quite unaware of them. Many of these basic thought patterns and conflicts are created in childhood, at which time the problems they create are often recognized by intelligent parents, who realize that they are important and quite possibly may require the attention of someone trained in scientific psychology. Although the better educated parents are beginning to understand some of the thought processes which go on in the child's mind with regard to food, most parents unfortunately still remain completely ignorant of the child's psychology concerning food. When one of their children refuses to eat food or complains about it, such parents are likely to retaliate with an angry scolding, with threats, or even with actual punishment. Social workers, nursery-school supervisors, and teachers who supervise school lunch rooms are all more or less aware of these problems, often more so than the parents of the children involved.

The psychologist, too, is beginning to realize that improper nutrition often causes profound personality changes and provokes conduct disorders. Any nutritionist with experience in a prison or similar institution likewise is aware that bizarre ideas often accompany conduct disorders whose cause is to be found in problems of food. Almost all riots within prison walls begin in the prison dining rooms, not necessarily because the food is bad, but for two other reasons. First, the men are grouped together in greater numbers at mealtime than at any other time or in any other part of the prison, thus providing fertile ground for the genesis of "mob psychology." Second, the partaking of food seems to stimulate men's emotions to an unusual degree, thus making them peculiarly susceptible to any other exciting factor.

Food also plays a tremendously important part in the happiness of the home. Many marriages are broken up by im-

proper nutrition or unappetizing food. On the other hand, when marriage is about to be disrupted as a result of causes totally unconnected with food, it frequently happens that the earliest sign by which one partner betrays his or her desire to sever the bonds of matrimony is a series of nagging and probably baseless complaints about the food served at the table.

Frances Stern, the prominent American clinic dietitian, has pointed out that, while there are psychologists who are especially interested in the problems of clothing, in domestic adjustments, in crime, and in innumerable other human experiences, few have expressed any great interest in the problems of nutritional psychology.

ATTITUDES TOWARD FOOD

Perhaps the usual lack of interest in food is because so many of us eat what is set before us as a matter of habit, and give no thought either to the fact that not everyone eats the same kinds of food or to the diversity of food tastes and attitudes toward food shown by different people. The Zulu delights in fried caterpillars, the Chinese gourmet in live baby white mice dipped in honey; Hindus refuse all meat; Moslems and Jews refuse pork. What some foreigners eat would disgust the average American; while what he eats would terrify the foreigners.

Eating is a mechanical day-to-day experience for the man in the street. Large numbers of people acquire this sort of attitude toward food: "Meat? You eat it! Milk? It's something you drink." At the opposed extreme, as Margaret Mead has declared, eating becomes a matter of morals to the dietitian. In the case of children, particularly, this moral attitude on the part of the nutritionist creates problems. Parents partake of it. Thus, as Dr. Mead also points out, many children are bribed to eat the things that are good for them by giving as a reward the things that are not so "good": children get

their dessert or their candy only after they have finished their "nice meat and potatoes which will make you strong." Such a practice is inadvisable purely from a health standpoint. If extra sweets are given as reward, there is the danger that the children's health will be impaired by the ingestion of too much candy or like foods; if normal sweets are denied, the child may be hungry. More important, however, is the effect of such bribery on the children's personality. The result may be a tendency further to confirm the youngsters' impression that foods good for them are unpleasant, while those bad for them are delectable.

People should not merely eat what is necessary to supply their bodies' physiological needs; they should enjoy their meals. Certainly, at least, they should not suffer emotional conflicts over food, nor should their likes and dislikes be such that essential elements of their diet cannot be assimilated. The psychologist may therefore be faced with a problem similar to that which confronts the farmer who "can lead a horse to water but cannot make him drink."

It has been the psychologist's task to analyze the dietary habits of individuals or groups of people who consume unsuitable diets in an effort to discover the psychological quirks which may be responsible for these idiosyncrasies. The psychologist has been interested, too, in making a careful study of the alterations in the mind of an individual that result from his leaving essential food elements out of his diet whether on a daily, weekly, monthly, or yearly basis.

If the results of such improperly balanced diets prove to be merely a weakening of the bodily strength of those eating them, then the physician's attention rather than that of the psychologist is obviously demanded. If, on the other hand, the lack of some essential food element in the diets of people causes them to become lackadaisical or continually fatigued, or affects their judgment and mental attitude, then the prob-

lem is brought to the psychologist rather than the physician.

Psychodietetics has been interested in discovering the reasons why individuals form improper eating habits and why people, en masse, do not eat suitable diets. In these problems both physician and psychologist are concerned, each having his own special sphere of usefulness. To the former are usually brought those children whose parents are worried because they are not doing well in school. If the practitioner is well versed in dietetics and mental disturbances which may result from improper feeding, he will often recognize that the child's backwardness is a result of a vitamin deficiency, of a mineral deficiency, or of some similar nutritional defect.

The question then arises as to whether the child's physical disorder results from his parents' providing him with improperly balanced meals or whether it has resulted from the child's refusal to eat certain foods. In the former case, the physician will be able to deal with the trouble himself. In the latter, he will send the child to a psychiatrist unless he himself is an expert in the field of mental and emotional pathology. Even if the trouble is due to one of the franker metabolic disorders (for example, obesity due to overeating or to a defect of the endocrine glands, diabetes mellitus or a gastric disturbance for which a limited diet must be prescribed) there is also a psychological aspect of the treatment, for the patient's state of mind must be so adjusted that he will be willing to accept —as cheerfully as possible—the dietary regime recommended and will conform with it so long as may be necessary.

THE PSYCHOLOGY OF EATING: APPETITE AND HUNGER

All animals eat. Even the single-cell organisms have a means of ingesting those substances which enable them to continue their lives. More complex living units have more complex procedures of gathering and selecting food. As a general rule, only those things are eaten by a particular species that enable

that species to grow and to thrive. Occasionally animals are deceived—the mouse is killed with poisoned cheese, and even man, with his higher intellectual endowment, can be fooled the same way.

Man is driven to eat by the same internal mechanisms that are observed in most animals. Emptiness is the common foundation for hunger. Beyond hunger is another psychological process which causes man to eat: appetite (which is determined partly, it is true, by hunger), the complex of psychophysical processes which encourage man to eat at regular intervals, to enjoy himself while eating, and to select those foods he thinks are good or pleasant or both.

In an evaluation of the psychological principles generally applicable to the process of eating, two main aspects of the individual's personality must be studied: first—how and why he reacts to any given situation, what his basic mental endowment is, and whence spring the roots of his thinking; second, how his environment (physical, economic, and social) affects him. An individual acquires his attitudes toward food from his basic bodily structure, from his childhood experiences, and from his environment and associates.

As an example of the physiological makeup, it can be pointed out that there are many people who, though entirely unaware of the fact, suffer from slight food allergies. Although wholly negative findings may result from diagnostic skin tests made on them, such individuals have learned that certain foods "do not agree" with them, or they do not like the taste of others. There is no evidence, however, that a person's dislike of the flavor of a certain food is in any way indicative of his being allergic to it. Many people, for instance, do not like eggs, yet they do not necessarily develop a skin rash nor suffer an attack of migraine when they eat them. There is some evidence that people who are slightly allergic to eggs or certain other particular foods, apparently possess a kind signaling

mechanism in the brain which advises them against eating those edibles which produce allergic reactions in them, though they do not necessarily dislike the flavor of such foods. Yet, on the other hand, it is equally possible that there is no direct physiological mechanism warning against allergenic foods. In this case, the cautionary signal undoubtedly is based on a purely psychological association. Whether consciously or unconsciously, the allergic person remembers that a physiological upset of one kind or another followed shortly after each of or many of the occasions on which he ate the particular offending food. Hence, he automatically realizes that he should avoid the food in question.

The physiological causes of hunger and appetite also have an important bearing on a consideration of the psychological aspects of eating. A knowledge of both physiology and psychology is needed to answer fully so simple a question as what compels people to eat at all, what causes them to drop all other activities at certain definite hours of the day, and what induces them, almost unconsciously, to attempt to keep their bodies in as well-nourished condition as is possible for them.

Hunger itself is not an acquired reaction. It is one innate in both men and animals and, perhaps the strongest of all, but very little is known for certain concerning the biological mechanics of hunger and appetite. We have no reliable information as to the exact mechanisms by which fierce hunger may be engendered in certain people, while their stomachs are still half full; neither do we know why others may experience no imperative hunger until many hours after their stomachs are empty.

The commonest examples of the first type of persons are diabetics, who, because of their cells' inability to assimilate glucose, are starving for this material, even though the cells are bathed in a blood serum far richer in this needed sugar than is the serum of a normal individual. Lack of the essential

hormone, insulin, prevents the cells from availing themselves of the glucose. Such hunger, though it is pathologic and serves no useful purpose, must be considered as a true physiologically inspired hunger sensation.

Curiously enough, people who may be considered the opposite of diabetics, that is to say those who have too much insulin in their blood, also evince this great hunger although their craving for food is not necessarily continuous. The mechanism producing this hunger in those suffering from "hyperinsulinism" apparently is different from that producing pathologic hunger in diabetics. In hyperinsulinism the abnormal appetite depends upon the lowering of the amount of blood-serum sugar below the normal.

Physiological hunger is manifested not alone by actual hunger pangs, which are intermittent, but also by a general feeling of weakness and restlessness or nervousness.

Appetite is a distinctly different sensation from that of hunger, even though it usually is present when physiological hunger manifests itself. For instance, a civilized white person might be feeling extremely hungry; yet, if he were offered the Zula epicure's dish of fried caterpillars, he almost certainly would find he had no appetite for them.

On the other hand, appetite may be present even when there is a complete absence of physiological hunger. Thus a man may have eaten a large eight-course meal and his stomach may even be uncomfortably distended, yet he may accept a second or a third helping of biscuit tortoni or strawberry shortcake because his palate anticipates its consumption with pleasure.

In general, it may be said that hunger is a physiologically induced indiscriminate craving for food—food of any kind—while appetite is that sensation, due largely to mental association, which causes an individual to select the foods that he prefers to eat.

Although marked genuine hunger is accompanied by deep, almost cramping peristaltic waves which cross the stomach, the subjective symptoms are not cramplike. Usually a vague feeling of emptiness first is felt in the region of the stomach, which becomes a dull, gnawing pain as hunger increases. This sensation creates in the hungry man an intense desire to obtain food, and the greater his hunger the less critical he is of the food available. The child who, following vigorous play, comes to the dinner table ravenously hungry manifests no food faddism or peculiar ideas as to what he wishes to eat.

The association mechanisms of the mind play a dominant part in the creation of appetite. This may be demonstrated by a consideration of the results of Pavlov's experiments with dogs. Pavlov, the famous Russian physiologist, accustomed dogs to the sound of a bell which was rung simultaneously with the offering to them of meat. After a while, the ringing of the bell was so firmly associated in the minds of the dogs with the tendering of meat that a copious flow of saliva would occur in their mouths whenever the bell was rung even though no meat was offered or shown to them.

A comparable reaction occurs in human beings. A person wants food, even in the complete absence of physiological hunger, at his accustomed mealtime.

Appetite is, of course, affected by hunger. When a person who is accustomed to doing heavy manual work stops all hard physical activity (as, for example, during a vacation), his body needs less food-fuel, his hunger is weakened or stopped, and he often has far less appetite than is normal for him.

Another psychological stimulant of appetite is the desire to occupy the mind or kill time. The most clear-cut example of this appetite may be found in the average ward patient in a hospital who is allowed a full ward diet but who has few mental resources to enable him to adapt himself to the mo-

notony and confinement of hospital life. It will be found almost invariably that his mind is occupied very largely with the question of when the next meal will be served. He usually will bring a keen appetite to each meal even though he may lose appetite before he has finished eating the food provided.

The same type of unusual interest in food, accompanied by a gargantuan appetite, is often displayed by passengers on ocean liners, who lie in their deck chairs all day and have little to occupy their minds. The enormous appetite they enjoy might be attributed to the bracing sea air alone if it were not for the fact that those passengers who manage to keep mentally occupied at all times during the voyage seldom seem to take an abnormal interest in meals.

The situation in which the diner finds himself modifies appetite. The gourmet, when taking lunch or dinner in the city, is highly fastidious about his food and may insist that it be cooked in just one particular manner; the same man will often eat underdone potatoes with badly cooked and poorly cleaned fish while he is on a fishing trip in the wilds of Canada.

Both association and deep emotion can affect appetite. A person's partiality for "mother's cooking" and his desire to have a piece of pie "just like mother used to make" probably is based on the fact that during his childhood he probably had the normal rapacious appetite of the young. Whether or not his mother had any culinary ability, the food she gave him tasted good. Hence, after reaching manhood, the man, by association, is apt to look upon his mother's cooking as the ultimate in culinary art. But there are other factors involved in this attachment to mother's cooking. The emotional feelings the average person has toward his mother and also the feeling of security and contentment normally connected with eating at home during one's childhood are not to be overlooked. Habituation also undoubtedly plays a part. The food

a person becomes accustomed to eating during the childhood, youth, and adult years, provided that it is not too unpleasant, is likely to become his standard of good cookery.

Most of the studies concerning hunger have been made upon the lower animals, but the results throw much light upon human conduct and food attitudes. Studies of pigs reveal that these animals have the ability to select the food best fitted for them and most likely to fatten them in the shortest time; studies of young children show that they, too, over a period of time, are likely to select the foods which give them a scientifically balanced diet.

There are reasons for believing that the human animal, if freed from the influence of civilization, would select the diet best suited to his needs. This expectation holds, however, only if he has no physical disease, has not become habituated to some abnormal diet, and has no emotional condition which alters his physiological nutritional judgment.

Hunger is not a static condition. Successive series of hunger pangs increase in intensity if no food is taken, for the first three or four days; but thereafter they diminish in intensity until, at length, virtually no real hunger is felt at all. Most people do not realize this fact, and so they imagine that hunger strikes or prolonged fasts for the alleged purpose of health-building entail a far larger amount of courage and will power than is actually the case. This freedom from intense suffering, after the first few days of a fast, is maintained only so long as *no* food is taken. The eating of even very small amounts of food will bring back the hunger pangs in their full severity.

Hunger is so intense a sensation that it tends to change the entire attitude of starving people toward those around them. It has even led men to cannibalism. Partial deprivation of food, though it does not cause hunger in the sense of stomach contraction, nevertheless causes physiological changes which manifest themselves in behavior.

It was noted in the late 1930's that German tourists, in whose country butter and fats already were strictly limited, were inclined to gorge themselves on these foods, especially butter, when they went to France and England. Even though they might be people of considerable social standing, they were quite unembarrassed by the amused or surprised stares of their table companions which were evoked by the enormous amounts of butter that the Germans so greedily consumed.

This appetite might be purely psychological. The Germans, subconsciously feeling that their health or life had been endangered by their deprivation of butter, may have eaten such vast quantities in the belief that they thereby were helping to prolong their lives. However, the voraciousness with which the butter was consumed and the fact that greater delicacies were ignored in the urge to consume butter make it seem more than probable that their behavior was a response to a specialized inner physiological nutritional urge.

FACTORS AFFECTING FOOD-SEEKING BEHAVIOR

There are three main determinants of eating:

1. Hunger
2. Appetite
3. Custom, which may be subdivided into
   (*a*) Habit
   (*b*) A sense of duty

Hunger itself is one of the prime drives of human behavior. Were it not for hunger, thirst, the desire for self-preservation, sexual desire, and mother love, the individual could not continue to live nor to propagate future generations.

The human machine cannot operate without its fuel and repair material any more than can any other machine. Insufficient stress is usually given to this fact by most nutrition teachers. It must be recognized that, except under abnormal conditions such as sickness, mental derangement, or the later

stages of prolonged starvation when the desire for food has passed, the human being is determined to eat at any cost.

The nutritionist, then, may take it for granted that anybody who is normal or nearly so is going to eat and all that needs to be done is to guide his eating behavior. When a person refuses to eat at all, or consistently insists upon eating only a diet which obviously is grossly insufficient to maintain health or life, the nutritionist must suspect mental disease or a serious bodily disease, and she should refer the patient to a psychiatrist or physician instead of trying to handle the case herself. The same holds true when a person eats bizarre articles of food.

It has been pointed out that there are seven probable factors involved in hunger and appetite:

1. The immediate stimulation of the organs of taste, smell, touch, and sight by odors, taste, and appearance of the foods. The odor of a well-cooked dinner causes anticipation in the mind of the guest. Temperature is also a factor, as evidenced by the popularity of hot food on cold days and vice versa, even though ice cream on a hot day has the ultimate effect of increasing bodily discomfort.

2. Stimulation of the appetite by memory association with the pleasure previously derived from the eating of certain foods. A child may continue to gorge himself with candy, even though he already may be almost at the point of feeling ill from the immediately previous consumption of an excess of desserts or of other foods. Another example is the soldier or explorer who has been deprived of his favorite foods for a lengthy period. Upon return to his home, he almost invariably has a continuous appetite for such foods, even though he already may have consumed more food than is good for him.

3. A special craving for some food may upon occasion be exhibited by normal persons. The reason may be purely psychological; for instance, a person may hear so much praise of

the gustatory appeal of a certain dish that he develops an intense yearning to partake of it.

These special cravings, however, undoubtedly are motivated by a true physiological hunger in many instances. Wild herbivorous animals, for instance, when they have been feeding in territory the soil of which has been partly denuded of its mineral content, will often travel miles in order to reach a salt lick. The desperate hunger for these salt deposits may be due to the animal's desire for common salt, but more often it is apt to be motivated by the need for iodine, which these salt licks also contain.

While many physicians feel that the special food cravings of the human female during pregnancy are merely psychological quirks, it is at least equally probable that they are manifestations of a genuine hunger for some particular mineral or other food element that the mother urgently needs.

4. Habit is important for its psychological conditioning of a person to eat certain foods at certain times, whether he needs the food at these times or not. Advantage is taken of the comparative ease with which food habits may be formed to condition children to eat hearty meals at regular intervals.

5. Good general physical condition of an individual is accompanied by an adequate appetite. Such a person naturally is more likely to eat frequently and well than one who is not in topnotch shape or has some disturbance of metabolism. A person who has not overindulged in a particular food is also more likely to have a keen appetite for it than one whose system has been overloaded with it.

6. Increased activity or an increase of energy also stimulates hunger and the appetite.

7. Certain environmental conditions also are conducive to a keen appetite. For instance, a guest who is anxious to please his host often will be able to develop an appetite even though, left to himself, he would have no desire for food. Similarly, a

patient with loss of appetite frequently will be able to eat with more or less gusto when he is urged to do so by a pretty nurse or by a physician in whom he wishes to display his confidence.

THE PSYCHOLOGICAL SETTING FOR A GOOD APPETITE

Too often, the psychological concomitants of satisfactory eating are ignored by nutritionists, restaurateurs, and housewives. The human organism is sensitive to influences which do not affect lower animals, resulting from cultural conditioning to which the animals are not subjected. Hence a number of conditions must be borne constantly in mind in evaluating a patient's failing appetite and in attempting to restore him to normal eating habits.

First of all, the emotional milieu is very important. Novelists never have hesitated to emphasize this factor, which may be observed even in the lower animals. A dog who recently has been whipped cannot be enticed to his dish, and the same may be true when he is worrying about his master's absence or illness. The maiden who has just had a lover's quarrel, though she may be able to control her facial expression and hide her feelings, will often betray her emotional upset by temporarily losing her appetite, even for her favorite dishes.

Excitement, too, may be a strong factor in inhibiting appetite, even though the excitement be of a pleasant nature. A person whose whole mind is filled with exciting, pleasurable thoughts may find himself for a while quite unable to concentrate on so prosaic a business as eating. Eventually hunger will gain dominance, and then he may consume even more food than normally.

The greatest deterrents to normal appetite, however, are worry, fear, and preoccupation with a worrisome or difficult problem. The best emotional stimulants are: (*a*) a situation of calm but complete contentedness, such as is experienced when

things as a whole are going well; (*b*) a feeling of mild elation; and (*c*) a condition of ego-stimulation.

This last condition is very important. The honored guest at a table or one who knows he is holding the attention or interest or admiration of the other eaters usually finds that he has a better appetite than he otherwise would have.

Preoccupation with a difficult or important problem requires some special consideration. This condition is usually called worry, and is different from preoccupation with exciting or pleasurable thoughts or even with some mildly interesting subjects, since it has an element of depression in it. This sort of preoccupation, or worry, makes it difficult for a person to enjoy a good meal. The hostess who has been worrying over the menu and who still is worried as to whether or not her guests are finding the meat delightfully appetizing and efficiently served is seldom able to enjoy the meal herself—even though the dinner be a culinary masterpiece which includes her favorite dishes.

Almost any kind of excitement is likely to act as an inhibitor of normal appetite. A commotion of no matter what kind or any unusual activity of interest occurring during a meal serves to interfere both with the desire to eat and with the digestion of that which is consumed. This inhibition is noted most markedly in the case of children. The new environment encountered in a restaurant by people accustomed to eat at home, especially if a floor show is being given, is a common example in which is seen the appetite-retarding influence of excitement.

Fatigue in the eater is a very important factor, which may operate at the psychological as well as the physiological level. In itself, fatigue may cause a number of conditions which make assimilation difficult. The expenditure of energy that brings on fatigue causes a diminution of the blood supply to the stomach and intestines, so that a tired person often reports

that the meal he has just eaten "feels like lead"—the food remains undigested. Studies have been made on people who have expended great energy in Alpine climbing, and it has been shown that the secretion of their gastric juice is delayed for an hour or two after the completion of such exertions.

It has been shown that sexual excitement or stimulation may adversely affect a person's ability to eat or digest a good meal. Some little while after the sexual excitement has subsided and the accompanying emotions have been calmed, appetite is usually stimulated strongly, owing to the body's need to replenish exhausted nerve and gland elements, especially when the sexual desires have attained complete satisfaction. In the event of marked sexual exhaustion, on the other hand, the return of appetite may be delayed until the body has rested.

When the physiological factors affecting hunger diminish and there is thus little real appetite, a number of psychological factors come into play and may tip the balance one way or the other in regard to a person's desire to eat. These factors are largely social in nature, and vary according to the individual's background and psychological adjustment. The man who has been used to mixing with all classes of people is not likely to be greatly affected by the presence of somebody with an offensive odor sitting nearby. Even men who might find such an objectionable presence highly disturbing are often able, if they are well adjusted psychologically, to overcome their distaste and to eat more or less heartily. On the other hand, a fastidious man or woman, especially one with a neurotic tendency, might be unable to eat at all or might even become nauseated if seated near a malodorous individual.

Some persons through training and tradition develop standards which become so definitely a part of their personality that even minor changes of environment may disturb their appetite and ability to enjoy and digest food. An example is af-

forded by a certain girl in a state university. At home, she had been used to dining under conditions of comparative opulence. At the university she was compelled to dine in one of those eating places commonly described as a "greasy spoon." She dropped out of the university after a period, because she could not become adjusted to the lower level of her food environment.

THE SYMBOLISM OF FOOD

Although the primary function of hunger and appetite in people is to compel them to eat and to choose foods they need, eating provides pleasure which may be an end in itself. Otherwise civilized man, with his sedentary life and so many interests and pleasures to distract him, probably would require a hunger sensation much more readily aroused than is the case and would need other pre-eating stimuli before he could be induced regularly to take enough food to keep himself at the maximum possible degree of health.

The pleasure of eating, too, has given rise to the consumption of food by large numbers of people on a scale far greater than the physiological needs of the human organism can justify. Diamond Jim Brady, tremendously overweight, nevertheless thought nothing of consuming several dozen oysters, two or three huge steaks, several portions of fish and entree, and amazing quantities of other food, all of which he would wash down with quarts of orange juice or other liquids. A great many of his prototypes in miniature can be observed in many homes.

Dietitians in food clinics where reducing diets are frequently prescribed are familiar with people who, when asked if they are overeating, vehemently deny the accusation. Not only do they disclaim overeating, but they often assert also that they eat so little that they wonder they do not lose weight. An analysis of food intake, however, usually shows that they

are consuming very much larger meals than their body's basic requirements demand, and also that they engage in extensive between-meals nibbling.

Although abnormal metabolism or other physical disorders may be causal factors in creating this excessive appetite, it usually is the result of habit, and the pleasure of eating is so much more potent a psychological factor than the ridicule of friends or the development of an unsightly figure that the excessive eating generally continues. Even when, as may often be the case, the undue interest in food stems from the individual's unsatisfied sex desires, the abnormal appetite is nevertheless pleasure-promoted.

In all food programs, it is necessary to keep in mind the influence of pleasure. Neither youngsters nor grownups can be blamed for refusing to accept a food program drawn up with a sublime disregard of the fact that almost no one except a food faddist will eat for health alone.

Out of this pleasure principle, a number of secondary considerations arise. For one, food is a symbol of security. A person who has enough to eat, has it regularly, and does not have to worry about where the next meal is coming from is better balanced emotionally than the person who has to worry over the problem of obtaining sufficient nourishment. While it is true that the need for food may motivate a person to accomplish greater feats of business or professional activity, to raise his economic standards, it is the desire for this security in food which is the compelling factor rather than pure ambition or the desire to eat sumptuous repasts.

Children and adults who have been living precariously even though they may have had, by and large, enough to eat to satisfy their physiological requirements, express their sense of insecurity by gorging themselves whenever the opportunity presents itself. Workers caring for refugee children brought to the United States between 1933 and 1939 noticed that these

youngsters, who had not known food security in Germany or later in Austria or Italy, gorged themselves as long as they were unsure of the reception which they could expect in their foster homes or of their friendly acceptance into the American community.

Those children who were placed in homes where they immediately were shown affection and given a sense of security very quickly gave up their frantic eating and lowered their food consumption to a level more nearly compatible with their bodies' physiological needs. In one or two cases which came under the observation of the present authors, refugee children who had become well integrated into their American homes quickly resumed their gorging when, because of the separation of the foster parents, insecurity loomed once more.

Soldiers and others who have been in places where the food supply was uncertain eat enormously when they have returned to a secure environment even though while away they may have obtained enough food to keep them well nourished.

A further psychological phenomenon pertaining to food is the fact that it often is a symbol of power or even a weapon of war. In the case of the Roman emperors, for instance, food-consuming orgies became the fashion as the emperor himself increased his power. At these feasts, huge repasts were eaten, with every attention being paid to the esthetic, both in the meal itself and in the surroundings. During many of these feasts, regurgitation of food already consumed was intentionally brought about so that more could be eaten.

The importance of food as a symbol of power or social status is seen in the political life of America. Jefferson's enemies made fun of him because he employed a French chef. They hinted that his divergence from the usual custom suggested that he was not in sympathy with the people of his own country. Only recently, a candidate for Congress successfully defeated his opponent largely because he made fun of the

latter, charging that he ate oysters and other "bizarre" articles of food when in Washington. The majority of his electorate apparently thought that the eating of oysters was either a sign of insanity or of snobbishness.

Among the people of older civilizations and even among primitive tribes today, food frequently was and still is the most valued possession. Among such people the theft of food was and is considered an insult to the original owner's pride. This feeling is so firmly rooted in the Trobriand Islanders that the death penalty is sometimes imposed for the theft of food. In this same primitive tribe, families vie with each other in the production of food, and the man who has the highest pile of yams has a position in the community which is beyond question. Here again, both security and power are symbolized in the growing and ownership of food.

Another among the symbolic phenomena involving comestibles is that food is often considered a token of friendship. Among the Chinese, at least until recently, a gift of food was considered equivalent to the signing of a treaty of peace, and the refusal to send food or to share one's table with another was considered an unforgivable insult.

To a lesser degree, this symbolism is recognized in our social life today. People conduct business and politics across the dinner or luncheon table, at which he who seeks co-operation is host. This practice is not a case of pure symbolism, of course. The pleasure of eating and the mental relaxation customarily occurring while eating make it easier to bring a companion's mind closer to one's own desires. The use of alcoholic beverages, of course, also greatly aids in overcoming resistance to one's point of view.

Certainly, it is true that the feeling of congeniality among normal people is enhanced by good food. It makes social activities more pleasant and the barriers of reserve are more easily

broken down. This fact is not simply a matter of custom, but is rooted as well in the facts that pleasure is gained from food and that those who make food available to others symbolically express their friendship in this manner.

II

Food Habits, Fads, Customs, and Aversions

THE NATURAL tendency of most people is to continue doing the things that they like and to resist taking up something new. Since most people formed their eating habits before the newer discoveries in nutrition were made available to the public, their diets are frequently faulty. These eating habits are very hard to break.

Each individual has a number of articles that he likes. The preferences come to him through his experiences at the family table and the family members in turn acquire their likes and dislikes for various foodstuffs from their cultural background, from their associations, from the various influences to customary selection of food, from fads, and sometimes from aversions. In many instances these preferences can be used as a basis for a well-balanced diet.

Since the basic conduct of people is largely habitual, it is important, in understanding the psychology of eating, to have an idea of how these habits are formed and how they are modified by fads, fashions, and aversions. The impact of these social-psychological factors must be viewed in the same light as the basic food habits.

The dietary habits of an individual are determined in childhood. The child, through training, instruction, and example, forms, before he is very old, a number of ideas and procedures with regard to his diet. If he has been properly reared, he finds all foods to be acceptable. If he has not, he is a victim of individual food fads and aversions.

Obviously, children in all countries do not eat the same things, and even children in different sections of the United States eat different foods or, at least, foods that have been prepared differently. To understand the food attitudes and interests of the child, one needs only to watch him eat and to see the forces that react upon him. In order to understand the eating procedures of the adult, however, one must go further.

The child is influenced at first by his parents who are inclined to feed him what they believe to be "best for him." What is "best" for any individual varies from time to time. It changes with our scientific knowledge of bodily requirements and of the nature of foodstuffs, and it changes with the opinion of the teacher or parent who is inculcating good food habits in the child.

In eating, as in all other social behavior, the child soon learns what is acceptable and what is not. The sociologist may know why a certain eating procedure is acceptable, but the child quickly learns that the reason it is acceptable for him is that, if he does not follow it, his mother's loving attitude toward him will be withdrawn temporarily or he may suffer a pain in his stomach.

As the child grows into an adult his food habits become fairly well fixed. They are likely to change only if he moves from an isolated community to one with a wider variation in foods, or if he changes from one country to another where the food habits are different, or if he has the misfortune to find himself in the company of some cult or group of people who have bizarre ideas about eating.

THE DETERMINATION OF FOOD HABITS

Many conditions determine the nature of the food habits of adults. The most important is probably the *geographical nature* of the place in which they have been reared. Not only in each country in the world but often also in each province, state,

or other subdivision, there are differences in the choices of food and in the way that the food is prepared. These differences may eventually be ironed out globally, as they have been in the United States, to a large extent, by an improvement in transportation and in methods of preserving the foods to be transferred. The meals eaten by colonial New Englanders were probably scantier than those in the southern colonies not because of the more austere character of the Puritans but because the farming season was shorter, thus limiting the number of things that could be grown. The traditions of the middle-class immigrant to the northern area as compared with those of the patrician immigrant in the South may also have been an influence in the different fare. The patrician's love of luxury, his attempt to reproduce those things that delighted him in England, were carried over to the new continent.

The isolated settler, however, had to eat what best he could, and the bare nucleus of a palatable meal was accepted in any community as being quite adequate. Each man had a stereotyped impression of how hard it was to produce a luxurious meal and so accepted from his neighbor, when he visited, the same kind of meal he himself was accustomed to having.

The adjustment of eating practices to what is considered good nutrition has been a function of another part of the human personality, that is, inventiveness. One could never expect the New Englander to eat subtropical fruits unless they could be preserved until he received them. One of the few imports of foods to colonial New England was tea, and although tea is nutritionally insignificant, it is of great significance from a psychodietetic point of view. As has been pointed out, generally speaking, a person is not concerned with calories or with a balanced diet, but is primarily interested in whether the food tastes good or bad and whether it gives him enjoyment and a sensation of well-being and strength. The coarse, hard diet of the New Englander was just such a diet, but only after

hunger led him to become accustomed to it. The palatability of the strange foods increased as he applied older methods of food preparation to the new articles of diet. He imported molasses from the West Indies and there was some importation of oranges, but as a rule distances and time were too great for bringing foods from one part of the world to another.

While it is true that lower animals, when starved for a particular nutritional factor such as the vitamin B complex, will gorge themselves on foods containing this substance, this ability to correct dietary errors automatically does not seem to exist in the mature human being whose dietary habits are pretty well fixed. The mildly iron-starved man does not seem to crave spinach or liver in his diet. On the other hand, major deficiencies may be automatically corrected. A prominent Canadian physician told the authors about a group of woodsmen who had been away from green vegetables for a long period of time and upon returning to civilization raided the first garden that they saw, leaving it just as though a blight had come upon it. Their need for green vegetables had this dramatic result.

Until a community is educated to want something new, either because its leaders have eaten it as a luxury at someone else's table or because they have heard a great deal about it through various educational means, it is unwilling to accept the unusual as an article of diet. Pomegranates, for instance, have been for sale in all parts of the United States, yet the demand for them has never been enough to justify extensive cultivation. In Mediterranean countries, however, they are very popular and are considered an excellent article of diet.

Food habits have been built up primarily around those things that can be easily procured. Yet it is an interesting psychological phenomenon to note that little education was necessary to induce people to eat newer foods when they could be brought quickly from the place of production or when they could be stored over a long period of time without having

their palatability destroyed. Palatability is significant in determining how quickly a needed food will be widely adopted.

The English in the nineteenth century were already beef eaters in so far as they could afford the scarce meat product, but when refrigerated steamships brought loads of beef to English shores, the increase in a short time in the amount of meat eaten by all classes was amazing.

Food habits are determined in their formation by *economic considerations.* Children who have been brought up in countries at war or during a depression form strong desires for foods which were given to them because they were cheap and plentiful. The cheap carbohydrates of the 1930–37 depression formed the major food for many families. Children who were taken from these families and placed in institutions or in foster homes were found to be very difficult feeding problems because their ideas of what was tasty and what was not tasty were so thoroughly fixed that desirable foods were rejected. Likewise, children who were brought from Germany in 1936, 1937, and 1938, when Goering's motto of "guns rather than butter" had already cut down the number of imported foods, showed a great deal of suspicion and in some cases required many months to become habituated to American foods. This behavior was different from that of the butter-starved German adult who gorged himself when he traveled.

THE COMPLEXITY OF THE FOOD HABIT

In addition to the availability of the food and to the fact that certain families become used to specific foods because those foods are the ones that they have been financially able to purchase, a number of other factors come into play in the formation of food habits. Naturally the customs to which the person has been habituated at home are important, and the way children are trained depends upon the food habits of the parents. The variation in diet may be racial, national, religious,

or merely traditional in origin. It is very difficult, however, to label any food habits as racial because in most instances we find various groups of persons within the race eating entirely different foods, which are contingent upon the social milieu into which they have been transplanted or in which they have been reared.

The dietary habits of national origin are to some extent predicated upon geographical and transportation considerations, but are responsive also to traditional influences.

Traditions are too often neglected by nutritionists who are planning an improved dietary regime for a family or for a community. All people do not respond in the same way to the introduction of a new article of diet. Most of the resistance is based upon tradition. Families who readily adopt a new food are likely to be those whose traditions involve flexible diets, the attitude that everything produced for human consumption should be tried at one time or another, or who have eaten some foods similar in nature to the new one which is to be introduced.

On the other hand, age and affection toward those who are responsible for the food preparation may play an important part in the acceptance of a new food. Those who have done considerable work in industry with the old people who have to be employed in wartime find that as a general rule the man who can be labeled mentally old is resistant toward new ideas. He may be a very valuable employee if he is used on a machine to which he is accustomed, but he may not be able to adapt to a new one.

There are all degrees of this aging. Justice Oliver Wendell Holmes, at ninety, certainly was not resistant to new ideas brought before the Supreme Court. In fact, he was more liberal—that is, more adaptable—than many of his colleagues on the bench who were much younger. The inability to change ideas comes more from a philosophy than from a state of bod-

ily health. If an individual has habitually enjoyed new ideas, even though age advances upon him, he will continue this enjoyment. On the other hand, for most of mankind, the assimilation and comprehension of a new idea is difficult and grows more difficult as a person's life becomes routinized. Hence, confronted with a new food, older people may say, "What was good enough for my father is good enough for me," and offer considerable resistance to the addition of the necessary new nutritional element in their diets.

The part of the community that is most likely to adjust to a new article of diet is the group who still have some of the adventurousness of adolescence with well-rounded attitudes toward food, so that they are no longer being coached as to what to eat and yet are not so old that they are resistant to new ideas. Hence some communities, which might be labeled as conservative communities because of the predominance of elderly people on their town councils, in their management, and on their tax rolls are difficult communities into which to introduce a new article of food, while a town built up of soldiers or young industrial workers offers the greatest promise of success for the introduction of new feeding methods.

Beyond age groups themselves and the resistance of aging personalities, the effect ot emotion comes strongly into play in habituation to food. In the well-adjusted household the parents, while perhaps they are not idolized, are looked upon with a great deal of admiration by the children and are considered as models.

Because of this fact, in childhood the *example* of good feeding practices on the part of the parents produces results in the children, but there is an emotional attachment to the parents which goes even further. Children identify themselves with the loved parents and the things that the parents reject or enjoy for one reason or another determine what the child does or eats.

A case in point occurred in a home with which one of the authors was familiar. The boy in the house idolized his father, who disliked fish and relished rare roast beef. He observed his father eating rare roast beef and always asked for rare roast beef as he grew up. On the other hand, he was often given fish for lunch and the fact that his mother ate fish with him, as did the other children in the family, gave him the idea that fish was an acceptable article of food. For many years he enjoyed fish. but when he was about thirteen or fourteen he learned that his father did not like fish; from that time on until his maturity, the boy did not eat fish and maintained that he had never liked it. It was obvious that he did not really reject the fish but was merely identifying himself with his father. A psychoanalytic study of his personality revealed this identification, which showed itself in other behavior besides eating.

If, then, in a community there are a number of strong leaders, father surrogates, who set the pattern for eating, the feeding pattern for such a community might be stereotyped no matter how many educational influences were brought to bear from the outside. This identification is one of the conditions upon which the establishment of bizarre eating habits and food cults rests.

FASHIONS IN EATING

Even the expert nutritionist gives little thought to that significant psychological mechanism, fashion. Perhaps no great harm has been done to the general public health by fashions, but there have been certain fashions in eating which were not particularly beneficial. Behind most food advertising lies the idea of setting up a fashion, but fortunately the Food and Drug Act, as well as the realization on the part of the advertisers that they must give a reasonable value to the consumer, have resulted in healthful rather than unwholesome fashions.

In the United States, fashions in general are probably more

important than any other type of social-psychological phenomenon operating in the community, whether as to clothes or as to community and home nutritional programs.

After a fashion is started deliberately by somebody, it prospers because it fits into a need in the community even if that need is only for variety. It may disappear and recur again and again in different forms, and it usually comes from the example or suggestion of somebody who stands as a father surrogate or has a great deal of prestige in the community.

A food fashion is not necessarily healthful, although it is probable that if the fashion becomes permanent or semi-permanent it does serve a beneficial function. For example, it is not unusual in New England today to eat a very heavy breakfast of fried potatoes, meat, and pie, which has grown traditionally out of the need for the farmer and the hewer of wood to have an adequate caloric charge in his body to last him until he comes in from the fields or woods at noon to get his next big meal.

Apparently most of our fashions are harmless and are largely brought out through the large advertising programs of food producers. Suggestion plays a large part. If a child hears a famous baseball player tell about "Wheaties, the breakfast of champions," or sees a box of Kellogg's Toasted Corn Flakes with a picture of a celebrated airplane on the back, he is inclined to want these foodstuffs to a greater degree than he would have had he not heard the broadcast or seen the fancy box. Eating these cereals in most cases is beneficial rather than harmful, so that the establishment of these fashions for the trade-marked foods, from the nutritional standpoint, is not seriously objectionable. If one could establish a fashion in the community as a whole for each one of the health-giving but rejected articles of diet, the fashion would be well worth the effort required for its creation.

Food vendors, grocery stores and restaurants are quite im-

portant as creators of fashion. If foods are hard to get because everybody is buying them as fast as possible, even a person relatively unfamiliar with them may well get the idea that if they are popular they must be good. An unusual article which recurs often on a restaurant menu arouses sufficient interest so that it becomes very popular because the diner suspects he is missing something by not being fashionable.

FOOD ADVERTISING

A special starter of fashion, as we have indicated above, exists in food advertisement. There are three possible approaches in food advertising.

The first is to claim that the advertised food is more palatable than its competitors. Palatability is of extreme importance for those who manage institutions or for the mother who has to plan the food for the family. If, by some unfortunate chance, the tradition has grown up that a particular breakfast food is unpleasant, the advertising for that food can overcome this feeling in some instances.

The second approach the advertiser can use is to make nutritional claims. These will only appeal to those who are anxious to have a well-balanced diet or who are suggestible. People who are not feeling well and think that a change in their diets will help them respond to the nutritional approach, but they are more likely to respond to the third approach, the therapeutic.

The therapeutic approach is seen in an advertisement that offers certain foods to relieve constipation, headaches, or to make one brighter and more cheerful during the day. Claims of the therapeutic virtues in foods can be picked up frequently in any journal or newspaper which has a large feminine clientele. Bran, for instance, undoubtedly has beneficial results in constipation, yet the prescription of bran to cure it is inadvisable. If a food is drastic enough or chemically active enough to

have a medical value, it may alternatively do considerable harm to those who have no need for it. Nevertheless the therapeutic advertising approach is a very valuable one for selling to hypochondriacs and to those with bodily disturbances of mental origin, as well as to people who are not entirely sound in body yet are reluctant to go to a physician for some minor ailment, particularly some disorder such as obesity.

The following questions may properly be raised with respect to advertised foods. They can also be applied to foods suggested by helpful friends. These self-administered questions should be:

1. Are the therapeutic or nutritional claims of this advertiser checked by a reliable scientific body such as the Council on Foods of the American Medical Association?

2. Does he use vague authorities to give his statement plausability, as when the XYZ oats people say: "Thousands of doctors have endorsed oats as a valuable food," which is true, but implies that the doctors have endorsed the kind of "triple-ground, baked in clay" oats which the XYZ people sell. The psychologist is always amazed at the authority that a mere M.D. degree or the label of "doctor" has among those people who are considering changing their dietary habits.

3. It is well for the consumer to guard against such claims of superiority as "most healthful drink on the market." One must guard against any impression that the advertiser tries to give that this particular article is far superior to another one made out of the same substance.

4. Palatability being a purely psychological quality, one can only decide whether it is the "most tasty food" that he has eaten if he tries it himself. Certainly he must know that the processing of food nowadays is carried out with the idea of producing as much flavor as is possible, yet the decision of the eater is the only valid criterion.

Checking the claims of the advertiser against a good refer-

ence book or other authority is also a valuable method of setting up resistance to the advertisement of foods.

FOOD FADS

There is some misunderstanding among nutritionists as to the real meaning of the term, "food fads." The finicky eater is said to have food fads, but this is an incorrect use of the term.

A real food fad is usually bizarre in its nature. It suddenly arises for no reason except that it appeals to the suggestible mind. The function of the food fad is to serve as a relief from social restrictions and it is usually short-lived. If we attempt to apply this criterion to what is called a food fad among child guidance experts and nutritionists, we see that the criteria do not apply at all.

A typical food fad is often found among adolescents and is usually harmless, although it may seem to be nauseating to the more conservative members of the community. The most frequent food fads exhibit themselves at soda fountains where amorphous masses of ice cream, syrups, flavorings, nuts and fruits are collected on a plate under the title of "Cupid's Dream Sundae" or "Clifton High Victory Split."

Perhaps the most bizarre food fad of recent years was the live-fish-eating fad of 1939 when a Harvard student on a dare ate a goldfish. Because of the novelty of the thing and the fact that Harvard got so much publicity, a student at Franklin and Marshall College ate three goldfishes to share the limelight. Because Harvard was not to be outdone, the score was raised by that institution of higher learning to twenty-four; then a Pennsylvania man "raised the ante" to twenty-five. Later a student at the University of Chicago ate three phonograph records.

Without knowing the emotional and social background of the individuals who participated in this fad (it is impossible to determine why they began the fad), one can observe that

fish-eating fits the criteria for a fad—it was sudden, served no useful purpose except to lighten emotional tension, and was transient. Institutional rivalry carried it on, and the desire for publicity in individuals who had heretofore no other accomplishments to their credit possibly played a part, but these mechanisms are unique to this fad. In certain countries the eating of raw fish is acceptable and not a fad; in fact, San Juan Indians have eaten live fishes for generations. The true fad, on the other hand, is an aberrant social phenomenon.

Among adults food fads are less dramatic than in adolescents and often are responses to clever advertising of either the commercial or the word-of-mouth variety. The opening of a new restaurant with a special dish may bring persons to the door of that establishment in large numbers. When the next new restaurant comes the more suggestible of the customers will go to the newer place. Among the others, particularly if the atmosphere and food are acceptable, the former fad becomes a *fashion*. A third and even more highly suggestible group finds that one or two visits to the new café satisfy a social pressure which these individuals feel, for they can then brag that they have been to this new restaurant, eaten the *plat du jour* and so have "kept up with the Joneses."

There are negative food fads; the idea may get bruited about that certain articles of diet are bad for one or that a certain restaurant produces food which is not good, and the food or place is avoided. In the latter instance, the restaurant may be put out of business and one may suspect a jealous competitor. In the former case, however, one often cannot put his finger on how the notions that a food is not healthful arise, but they do.

An example of a negative food fad arose at the beginning of the discovery of the functions of vitamins. Because milled wheat had been freed of its husk which contained vitamin

elements, Alfred McCann began to recommend whole-grain bread, rather than white bread. The idea continued to grow until a large number of people felt that white bread was little less than poisonous and would eat nothing but whole-wheat bread. Since the enrichment of the white flour with the missing vitamin B complex, iron, and other constituents, white bread takes its place as a valuable addition to the diet, and is nearly comparable to the natural whole-grain bread. Yet certain individuals still will not eat white bread. These people may be called faddists even though the anti-white-bread idea has extended over a long period of time and even though the reason for the belief is obvious. It is the carrying of beliefs to the extreme rather than living up to a fad that makes faddists. Another reason why this attitude must be considered faddist is that it is not accepted by the majority of people, who were wrong in adhering to their preference for white bread before the enrichment program was developed.

Fads may be of two kinds: the first having to do with the pleasures of eating and the second having to do with the healthfulness of foods. In the case of a fad in which a food is adopted temporarily for pleasure, one looks either for the self-dramatization of youth or for the trained palate of the gourmet. In the first case, the fad disappears of its own weight, usually to be supplanted by some other favorite article of food or the maturing of an adolescent who loses his freakish taste. In the second type, the faddist supplants a favored dish with another meritorious or exotic preparation.

For the average person, a strong preference for an unusual dish does not constitute a fad. A fad must be widely accepted; and it is against this improper concept of the significance of fads that one must be on the alert. Individuals do have personal aversions, but the faddist's behavior is a social phenomenon.

FOOD CUSTOMS

Food fads and fashions may be adapted into the routine life of a nation or of large groups within the nation, and this psychological process is called the formation of a custom. If such customs forbid the eating of certain foods or certain combinations, they are known as *taboos*. The development of a custom is gradual rather than spontaneous as is the case of fads and fashions, and a custom is much more lasting. There *appears* to be a reason for customs, however, whereas in the case of fads and fashions the irrationality is at once apparent. To give a socially acceptable explanation rather than the real cause of a custom is "rationalizing," in psychological terms. The *real* reason for a custom may lie in antiquity.

When a food custom becomes strongly entrenched it leads to food habits and, of course, the same external pressures lead to the adoption of customary behavior in eating that bring about food habits. Geographical location, the availability of the food, the need for its preservation often play a part in the formation of an eating custom.

If a phase of nutritional behavior is accepted as "right" by a large proportion of the social group, it is a custom. Within a group there may be many attitudes toward a food custom. For example, the oyster lover tells the person who has an aversion to oysters that he should eat the succulent bivalve, either because it is "good for him" or he "doesn't know what he is missing." Customs fail to take into account individual differences and preferences and may even neglect the health-giving aspect of eating.

Food customs tend to harmonize with the other customs of the group. When clothing was full of frills and overelaborate as it was in the "Gay Nineties," the food also was overwhelming in quantity and variety, unnecessarily rich and unhealthfully overdecorated. Its appearance on the table almost

matched the clothing of those who were to eat it. Simplification of clothing and architecture was accompanied by simplification of diet.

The customary pattern as regards food shows its appropriateness in other ways. It is traditional that one should eat lightly before going to bed. The rationalization that is given is that it will draw the blood from the brain or cause nightmares. Physiologically, the withdrawal of blood from the brain during sleep is probably beneficial, but the current custom is that one should not eat at night. Yet there have been periods in the lobster days just mentioned when heavy dinners after the theater were *de rigueur*. A present-day custom is to eat lightly in summer and drink warm liquids to a greater extent in winter. Light eating seems to have a value in aiding the body to be heat-resistant so that the custom may be useful biologically. The drinking of hot liquids in winter may, on the other hand, be only of psychological value, for the warmth of the body depends upon the carbohydrates and fats which are burned rather than the temperature of the liquids, which, in a few seconds after swallowing, reach body temperature.

Another custom important to the nutritionist is noted when it is observed that women eat less than men, for in proportion to their size and the kind of work that they do they should eat the same amount (unless men customarily overeat). Yet, even in factories, women eat less than men of approximately the same weight because it is customary to do so.

Custom prescribes the routine of eating and food preparation. There may be some local differences; for instance, in New York the salad is often served with or after the main dish. In California it is usually served before. The fact that salad is served with most meals in restaurants is due to custom. A survey throughout the country reveals that the usual restaurant meal has meat, potatoes, a vegetable, salad, and a dessert. Bread and butter, and a beverage, often milk, are all served usually.

So it is true that what is served by custom to the usual restaurant guest is fairly well balanced. Yet, individual attitudes, aversions, tastes, and habits may modify the value of such a customary restaurant meal, and it is for this reason that the psychologist is interested in studying individual differences, with an eye to correcting them.

The purpose of nutrition education directed to the building of better food habits is largely to establish custom. If enough people eat routine meals which are well balanced, and make sure that the foods prescribed in the daily scientific ration are included in at least one of the day's meals, this customary behavior will establish a physiologically sound eating procedure.

Taboos are seldom as powerful as the positive customs, and many of them have died out or are unrecognized. The old idea that pickles and milk should not be served at the same meal has been exploded. It was in our grandparents' time that the "food combination" fashion, or perhaps fad, which built on the belief that certain foods were unwholesome when eaten with others, spread through the country and created a number of these taboos. Some of them have carried through to the present generation. Many grandmothers are shocked to see their daughters feeding their babies vegetables at eight months because when they were rearing children the idea was strongly entrenched that children should be kept on milk or a formula until they were a year old. The discarding of this latter taboo, with the addition of fruit juice and cod-liver oil a few weeks after birth, has been shown to be biologically beneficial. It is for health reasons that most taboos of a faddish or fashionable nature are discarded. On the other hand, taboos having to do with cleanliness, the preparation of food in a healthful manner, or the selection of proper food have grown in intensity. An example of an important current taboo is that one must not drink water from roadside springs unless it has been tested or unless it has been boiled.

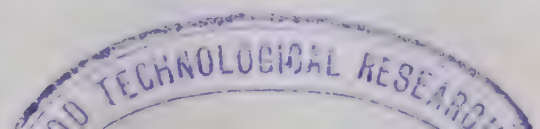
The "R months for oysters" idea was a taboo. During the warm months oysters spoil while being transported from their beds to the table, so that, prior to modern hygienic transportation, it was risking infection to eat oysters during those months which did not have the letter R therein—that is, the warm months.

Probably the Jewish dietary taboo against pork, which is the best known of the Jewish dietary laws, arose from the fact that pork slaughtered in an intensely hot climate spoils very quickly. Undoubtedly thousands of Jews eating pork before the establishment of these food laws became so sick that the connection between pork and their ailments was obvious.

FOOD AVERSIONS

When the average person uses the term "food fad," he usually means what the psychologist calls a food aversion. A fad as it is seen in its truest sense is an aggressive type of behavior, where foods are eaten in unusual combinations or are of an unusual nature, while the food aversion is found in one or two individuals on occasion and is only widespread when suggestion enters the picture. For instance, one child may dislike a particular article of food, which other children in the neighborhood like, and when that child goes to nursery school, he may create enough fuss to make the other children realize the attention-gaining value of disliking a food and they, too, may develop aversions. Fortunately, the opposite is usually true. A child with an aversion, seeing the other children eating the "disliked" food, overcomes his aversion.

There are a number of reasons for aversions. Most of them come from association with some emotional situation, as in the association of a beloved person with the disliked food; that is, the beloved person rejects that particular food, and the imitation of the behavior of the beloved person continues so that the dislike becomes habitual. But there are additional reasons for


TECHNOLOGICAL RESEARCH

food aversions. Poor preparation of a particular dish at some time will cause that dish to be rejected by a child for a long period of time; and the same reaction can be observed to a lesser degree in an adult.

Dietitians emphasize the development of an aversion to a food in childhood because the food was not well prepared. Oftentimes the first appearance of such a food occurs under such conditions that the memory of that first experience is an unpleasant one. A sloppy, untidy dish may result in the complete rejection of its main ingredient. Frequently, mixed foods which are too sweet, too rich, or have a thick consistency cause the rejection, not of that particular preparation, but of every identifiable ingredient.

An instance of the development of such an aversion is shown in the case of an adolescent who ate lobster for the first time in the form of lobster newburg. This particular combination requires considerable sophistication of the palate. The boy was then fourteen and had no taste sophistication, so after only a bite he decided that he did not like lobster in any form. When he reached adulthood he had to be completely re-educated. After eating broiled lobster on several occasions he decided that lobster was one of his favorite foods, but had he not been deliberately re-educated and had it not been the custom of his group to eat lobster, he might never have learned to like this particular food. From the nutritional standpoint, he probably lost little by his lobster rejection. From the social standpoint he had much to gain when he dropped his aversion.

Women, in particular, are affected by the appearance of a food. A dish that appears to be poorly prepared may condition a woman against it for her whole lifetime. Mussy or colorless helpings or dirty utensils and plates may not cause the rejection of the housewife or restaurant keeper who is responsible for its appearance but of the food itself.

An ingredient that disagrees with a diner, either because he

is allergic to it or because of some contaminating substance, also causes a food aversion. An illustrative clinic case is one in which milk was prescribed for an ailing child. It was found that this child had an aversion to milk. Upon studying the food history it was learned that when the child was about six years old some oxalic acid dropped into the milk. As a result, the child was taken very sick and had to have a stomach wash. Since that time she has never been able to drink milk. The fact that this aversion is not a real allergy and that she is not biologically sensitive to the food is demonstrated by the fact that she can eat junket, creamed vegetables, and other dishes containing milk in a disguised form without the slightest touch of nausea or illness.

Food aversions have all degrees. In the mildest form the aversion may be expressed by the term, "I don't like it but I'll eat it." The second phase is, "It doesn't agree with me," and finally, "It makes me deathly sick."

So we might simply say that some foods are disliked widely, their taste is not pleasant regardless of cultural influences; and though by training, education, and example, some persons may learn to like them, in general they are disliked nevertheless. When children are studied, observers do not find that the foods usually believed to be disliked, such as spinach, are actually rejected by them. So much discussion occurs about spinach and other allegedly rejected foods that the child hears they are unpopular and he, in turn, refuses them although, basically, he may enjoy them. The most unpopular foods, according to some studies, are parsnips and oyster plant. These foods are not marketed in great numbers probably because they do not suit the palate of many potential customers.

The effect of example in causing aversions cannot be overlooked. The discussion of disliked foods by an individual is bound to have an effect upon the members of his family, his friends, and others who are concerned with him. Fortunately

some of the people with the most dramatic dislikes in food are also the most cordially disliked by their friends. In many instances their dislike for an article of diet is apt to cause a retaliating interest among their acquaintances and their enemies, who try the food and show (if possible) a definite like in order to discredit the complainer.

Fortunately the whole matter of food aversions, of likes and dislikes, customs, and the general human tolerance of foodstuffs is not serious in the population as a whole. The occurrence of many aversions in any one person is improbable. The normal person, basically, will eat anything set before him if it is prepared in a familiar and pleasant manner. Food aversions, while they may be considered important in mapping out an individual diet, do not occur so frequently that they constitute a major problem in any scheme designed to give the country better nutrition.

III

Children's Feeding Problems

THE STUDY of children's feeding problems is important if only to reduce the discomfort felt by parents who have to contend with problem feeders. It is important also because of the significance of bad food habits and bad attitudes formed in childhood. Hundreds of thousands of American mothers are preoccupied with the fact that their children do not eat enough, eat too much, are finicky, eat better away from home than they do at home, or exhibit one or more of the countless other aspects of children's feeding problems. Such concern has become especially acute and widespread since the government has stressed the need for adequate nutrition. How, mothers ask, can children develop properly if they do not eat spinach, or butter, or orange juice—or any one of the innumerable foods that children are apt to reject?

In the consideration of the whole problem of the psychology of nutrition, the childhood food fads and the abnormal attitudes gained during childhood loom large. They influence the development of an unwholesome attitude toward food in the adult; hence childhood eating problems are not only worthy of attention by themselves but their treatment is also a prophylactic procedure against inadequate nutritional attitudes later on.

THE FEEDING PSYCHOLOGY OF INFANTS

The child is born with biological machinery consisting of a nervous system, muscles, and a general bodily construction which enables it to take nourishment. But even from the day

of its birth it has psychological problems in co-ordinating the parts of this machine.

A child is born with the ability to suck, but often, when put to the breast for the first time, the stimulus of the nipple arouses no response in him. Secondary problems then arise. If the mother does not know that some children must be taught to suck by manipulations of their mouth and cheeks, she immediately becomes disturbed over the supposed stupid attitude of the child; some overanxious, overprotective, and very defensive mothers fear they have given birth to feebleminded children.

Fortunately, the majority of children in the last two or three decades have been born either in hospitals or with a doctor present. The doctor or some wise neighbor knows what should be done; if the child cannot be stimulated to suck the breast because of lack of milk, he can be taught to suck the rubber nipple.

Anxiety aroused in the mind of the mother at the time of a first-feeding failure is often the starting point of a series of other problems. If the mother has a good attitude and is well balanced, she overcomes the unfounded anxiety and her child does not develop complexes. If she is willing to listen to advice and to follow it, the problem soon disappears. But if she is overanxious, easily disturbed or high-strung, her mental attitude affects the milk which she should have for her child and the child rejects the breast. Often the temporary and expected loss of infant weight after birth sets up a mental disturbance that may have an unfavorable effect upon milk secretion.

The mother's concern may be directed toward her own supposed incapacity rather than toward that of her child. Breast feeding is being urged more and more by health authorities. Some pediatricians once felt that a cow's-milk formula was equally satisfactory, but although a cow's-milk formula will nourish the child adequately as to growth and general health,

it lacks certain protective substances from the mother's blood stream. Breast feeding will protect the child against childhood disease for approximately its first six months. The mother who knows these facts, having made up her mind that she will nurse her own child, is bitterly disappointed if she cannot. Even though the apparent lack of milk in most cases is only temporary and is remedied when an earnest effort is made to stimulate milk secretion, the anxiety over the milk is sufficient to block the milk flow in some cases.

A large number of emotional factors associated with breast feeding are too often neglected. A pediatrician can prescribe as good a formula for nourishing the child as the mother can provide. But certain elements of an emotional nature are as important for both the mother and the child as the nutritional elements of the formula. No formula has as yet been devised which will enable the bottle to give the love, security, affection and the pride that even an infant seems to be able to gather from the mother's affectionate embrace while he nurses from her.

The mother, too, gains something from nursing the child. Nursing mothers, who are perceiving and frank, admit that the pleasure gained during the nursing period is closely akin to all of the other physiological and biological pleasures. Such pleasure contributes much more toward motherly tenderness and affectionate rearing than does time spent warming bottles, sterilizing, and concocting formulas.

Some research tends to indicate that with adequate mother's milk children experience a sense of security and a feeling of satisfaction, which often lead to a good adjustment in later childhood. For instance, the breast-fed child seems to have an inclination to thumb sucking and nail biting less often than does the formula-fed child. There may be no correlation between temperament and breast feeding, but in many instances the breast-fed child who is temperamental and restless during

infancy seems more likely than his formula-fed contemporary to calm down as he becomes older.

In any feeding method the temperament of the child must be taken into consideration. Some babies move about continuously; their waking hours are longer than those of others. Such a restless child is often too tired to nurse. If possible, he should be nursed after a period when he can sleep, not when he is crying and causing a disturbance. The apathetic and stolid baby, contrariwise, may need to be awakened if he is to nurse properly. Recognizing these differences in temperaments and acting upon them will overcome some difficulties of adequate feeding of the child.

MENTAL FACTORS IN THE PERIOD OF WEANING

Many mothers take the child off the breast early, or never attempt to breast feed him, but put him on the bottle in order that they may go to social affairs or to work. Doing so is neglecting their obligations to their children as regards the psychological benefits of breast feeding. Unfortunately some physicians, who should know better, encourage their patients to drop off the breast feedings in order to "make it easy on themselves."

The selfish mother is often inclined to speed the weaning process. Mothers in the slum areas of New York hasten the administration of solid foods to their children because they are too tired, too indifferent, or too ignorant to give them a properly balanced diet with milk, puréed vegetables, and the other nutritional elements which the child desires and needs.

The authors have not infrequently seen cases of mothers in New York City who have begun to give their children wine and spaghetti as early as the ninth month, the time when weaning can certainly be begun. Superficially, these children seem to thrive. The ignorant mother who has weaned her child in

this way often holds the baby up to the doctor as an example of a healthy infant because he is fat, bloated, and torpid, a condition which the mother in her ignorance tends to interpret as indicating adequate feeding, and a placid disposition.

As the child begins to take solid food, a new psychological strain comes into operation. Hasty weaning may aggravate it. If the child is normal, he will be inclined to take solid food in the third part of his first year as soon as it is given to him, but he may have trouble with the mechanics of swallowing and half of the food offered may be wasted by spilling. This situation disturbs the inexperienced mother who first of all may make too great demands upon the child because she does not know that all children begin as in-co-ordinate organisms. On the other hand, she may be disturbed by the waste—which essentially is unavoidable.

As soon as the child has teeth—indeed, as the teeth are erupting—he is ready to have something to chew. The ignorant provide unsanitary teething rings and gadgets of that sort; the initiated know that a small piece of rusk aids the child in teething and soothes the gums. This simple contrast illustrates how much ignorance, lack of understanding and lack of preparation exist in recognizing the needs, the demands, the attitudes and performances of children. The knowledge of these needs, demands, and attitudes affects the levelheadedness and the ability of the mother to make an adjustment to the weaning process.

The mother certainly needs to know that weaning is gradual, that even learning such a simple thing as chewing is a long process. The child must learn in a slow way to co-ordinate his jaw, cheek, tongue, and lip movement, and the mother must not be too discouraged if he does not sit right up to the table and eat steaks, chops, and potatoes like a little man.

THE PRESCHOOL CHILD

When a child is two or two and a half he should well be able to feed himself. At the age of one year some efficiency is expected in eating with a spoon and by eighteen months in handling a small glass. The use of knives and forks is a later development.

The ability to use any type of tool is a development of the personality which comes only with increasing maturity. Most children can handle a spoon fairly well before they are two years old. Of course the spoon is not held firmly in the hand, there is some spilling, and many times two or three motions are required to lift the semifluid mass into the mouth, but practice makes perfect unless some emotional complication interferes with normal development.

Though sharp objects should not be given to the child who is too young (lest he injure himself), the mother may show an abnormality in her own judgment by keeping the child from having a fork because she is afraid that something might happen, long after the period when the child should be handling it with some grace and dexterity. She may, for instance, be an overprotective mother because of some feeling of guilt and a fear that the child will hurt himself. Such attitudes are most frequently found in mothers who have had some misfortune with a previous child—perhaps a child has died, been injured in some way, or has become a chronic invalid owing to some carelessness on her part. The attention, which she feels should have been lavished on the older child, is concentrated on the younger, who is not allowed to use sharp objects, not allowed to play with toys unless they are carefully examined, and is kept so unacquainted with the eventualities of life that, if left alone for a second, he is more than ordinarily likely to get into trouble.

The same phenomena are observed when the child has to

learn to use the knife. It is only to be expected that the child of three or four, seeing the parents using knives, will tend to imitate the parents with such implements. Overprotective or overcautious parents will refuse the knife, not realizing that any kind of related implement, carefully blunted, can be used to aid the child in gaining such dexterity so that when the sharp knife is finally placed in his hands he can use it with comparative safety.

By the time the child has reached nursery or preschool age, certain rhythms and attitudes should have been set up. At the earliest age, the rhythms seem almost mechanical. Feeding periods are usually two and a half to three hours apart at birth, quickly grow to four, and the night feedings are dropped before the sixth month. By weaning time the child is able to eat three main meals with some refreshment in the middle of the morning and in the middle of the afternoon. This rhythm is important.

As was indicated in the first chapter, many people eat at the time when they are accustomed to do so, whether the physiological inclination is present or not. Thus people who emotionally are not ready for a meal can take the nutriment which will aid them in overcoming any problem which may have set up the emotional block. The man who has had a great many problems during a morning's work often allows himself to be preoccupied by these problems and goes without lunch. But if he is habituated to having his lunch, he will go through the afternoon with a depressingly low blood sugar. This eating-time rhythm is an expression that is fully developed in childhood. The child learns, first of all, that he must eat at regular times, and second, that it is unnecessary to eat between those times.

Recognition of the value of eating-time rhythm does not mean that the parent must set up hard and fast rules that the child cannot eat except at mealtime. For growing boys, whose

bodily activity is often great between lunch time and after school, a snack is necessary in the middle of the afternoon to enable them to enjoy the physical exertion they need after school. In younger children, particularly preschool children, the stomachs do not seem to be large enough to carry an adequate supply of nutriments from one meal to another; hence midmorning and midafternoon meals of fruit juice, cod-liver oil, crackers, or easily utilized food such as cookies seem to be indicated.

Deviations from a well-planned feeding program must be frowned upon for psychological reasons. The child who is fed at all hours by devoted aunts will soon be found to have lost that appetite which comes from rhythm alone and other psychological means then have to be used to stimulate the appetite. One of the most disturbing interferences with a child's routine is the practice of relatives and friends who try to ingratiate themselves with the child by providing either unnecessary or forbidden food at hours when eating should not interest the child.

ADEQUATE CHOICE OF FOODS

It is very important that the child learn early in life to eat a diversified diet so that he will not, later on, reject articles of food which are necessary to his well-being. Teachers and parents have found themselves much preoccupied by this problem. The studies of Dr. Clara Davis have emphasized the belief already held by those who have observed the feeding habits of animals that the human being is inclined naturally to select those foods which are best for him. Dr. Davis provided under experimental conditions a number of foods of different kinds and flavors, which were prepared for children who were just learning to eat solid foods. Her method consisted of setting the child in front of a table containing all of the various foods and allowing the child to select what he

wished without guidance from an adult. Each table contained all of the necessary food elements, protein, fats, carbohydrates, salts, and vitamins.

Dr. Davis observed two interesting phenomena. First, over a long period of time each child tended to select those foods and in those proportions which were best for him physically. Second, there was a tendency for children to go on sprees, in other words, to find some article of food which they liked at the time and make a whole meal of that particular article of diet; in fact, the child might run as long as several days without eating any but this one food. A survey of a week's intake showed that the child managed to get in the right proportions of food before the week was out, nevertheless. These children were relatively free from the social influences which affect diet. If all human beings were kept in cages isolated from one another, the probabilities are that they would choose a well-balanced diet, but unfortunately too many social factors come in to play early. In order to correct these social influences it is well to take into consideration what they are and what the possibilities are of controlling them.

A survey conducted by one of the authors indicates that in a very large percentage of people familiar foods are eaten without any major likes or dislikes. About 15 per cent of people have one or two pet aversions, although a much higher percentage have one or two pet objects of diet. In men the favorite is usually beefsteak, occasionally beef, but almost never a vegetable, except perhaps potatoes. This adjustment arises from the absence of strong social influences which affect the child at mealtime and is the result of excellent training during childhood which compensates for the unsatisfactory factors that come up at mealtime or in association with food.

During childhood tastes are cultivated for the foods that must nourish the child for the rest of his life. For that reason nutritionists urge that well-balanced meals be made available

for the nursery and kindergarten child. The psychologist goes further, emphasizing not only that the meals must be well balanced but that they must also have as large variety as possible in order to enable the child to acquire a taste for variety in food.

Although the child usually shrinks from new foods he can be taught to eat everything that will be necessary for him, and it requires only good judgment to make this variety extensive. Alternate foods should be as palatable to a person as those which he considers basic, for sometime during life, for some reason, he may not be able to eat the foods to which he is accustomed. If, for instance, he is unable to get oranges for vitamin C, he should like tomatoes, a natural substitute.

It is this type of thinking that Frances Stern has always emphasized in her food clinic. Miss Stern deviates from the injunctions of those nutritionists who lay down hard and fast rules for better eating, urging rather that foods be recognized in categories so that individual preferences may be safely indulged. To Miss Stern the injunction that a large amount of milk must be fed to a child during the day is too definite for practical value in many instances. The calcium, for instance, in the milk can be gotten from potatoes, the proteins from a variety of sources; thus a child who drinks no milk can still be well fed if there are sufficient alternates provided.

In order to enlarge the number of alternative foodstuffs new foods must be introduced reasonably often. Dr. Woolley points out that in games and in other activities the young child is resistant toward new things. He prefers to go along doing those things with which he is familiar and, in eating, his behavior is the same. This trait of the nursery or kindergarten child makes it difficult to introduce new foods. Yet variety seems to be an equally strong urge; although children may be especially fond of a particular food such as ham, a constant diet of ham day after day produces a revulsion in less than a

week in many instances. It is our belief that this desire for variety is a learned reaction. If the child sees a variety of foods coming to the table frequently, he expects it. Furthermore, the child probably gets a surfeit of some nutritional elements if the diet is not varied even within the group within which the repeated element falls; ham, beef, pork, and veal in all probability supply slightly different elements which the child needs; hence the child demands different meats, even though the nutritionist considers all of them interchangeable.

In introducing a new food there are certain elements that must be considered if that food is to be accepted without reservation by the child.

It has been found in nursery schools that an attendant or, for that matter, a parent, should be prepared to talk in most favorable terms about the flavor of the new food. He must not, of course, promise anything which cannot be verified when the child tastes the article. The child may be warned but, nevertheless, encouraged if the food has a slight flavor deviation from that to which he is accustomed, as often occurs in root vegetables, tomatoes, and fruit juices. The person who offers this encouragement must be one whose opinion the child holds dear, and she must be very calm about the whole matter.

Example is even better than a pep talk. If the child sees other children or his parents, or the other people at the table, all eating some new article of diet he will be preconditioned to eat the new food. In other words, the method is one of building up confidence in the person who is giving the new food and in the belief that the new food is expected to be as palatable as have others in the past.

Good practice in the nursery school and in the home has been to introduce the new food in small quantities and perhaps with interesting preparation. In one case, when peas were first served, two small peas were all that was put on the

child's plate. After he tried those two he was permitted to have more but he was not urged to do so.

In introducing new food there must be no urging or pressure. The trial of a new food should be done by the child himself. The choice should be made by him, and the portion should be small. He can be overwhelmed by a large portion even though the food itself is palatable and he is prepared to receive it. It is better for the child to go along for several weeks or a month eating only small portions of some food than to condition him against that food by forced feedings.

The texture of the new food is a matter of some importance. Children of each age have special preferences, but for children of all ages, certain textures are discouraging. Tough meats are disliked even by adults; so it is reasonable that meat should be tender for children whose jaws are not well developed and whose muscles are not strong. Although beefsteak may have a delectable flavor and the child may like its appearance, he will, nevertheless, reject it if he finds that it is too difficult to chew. Mothers are frequently discouraged when their children prefer hamburger to the choicer cuts of beef or prefer pork sausages to various cuts of pork. It must be remembered that tastes differ with individuals and that children may be satisfied with the less expensive meat cuts, which they find easier to chew.

Certain consistencies seem to revolt average children. Very sticky foods which are hard to chew because they stick to the teeth, such as caramels or gruel which is too thick, are sometimes rejected by children and this rejection may last for a considerable period of time. Children notoriously do not like the foods which are difficult for them to control in their spoons or in their mouths.

High seasoning also must be guarded against in feeding the child new food, although it is surprising how quickly the highly seasoned condiments are adopted even by a very young

child if he is not forced to use them. For instance, a child may see catsup being used at the table. The first two or three times that he tastes catsup he may not want very much. Sooner or later the child will grow to like this and other condiments and, while many nutritionists frown upon their use, still the addition of their flavor to new foods often bridges the gap between a strange food and those to which he has been accustomed. Children who use catsup or mustard on their food must have additional training to teach them to like the food itself without the addition of the condiment. The sweetening and flavoring of foods must be handled in a similar way. But it is easier to recondition against condiments or sweets than to teach children to like a new food with a strong taste.

Certain foods themselves are not usually tolerated by the preschool child because of their strong flavor, typically onions and turnips. Blending them with milk and other bland media may introduce the characteristic flavor in a diluted form so that the child will learn to like the food itself even though he did not like the original form.

In giving a new food to the child, therefore, it is necessary to see that the texture is right, that the food is well prepared, that the transition to the new taste is not too marked, that it is prepared in the form which the child is able to utilize (bearing in mind his small mouth and infantile muscles), and that he should not be discouraged by the amount.

There is one last condition that seems to be of great importance. The child who does not like a particular food should not be led to believe that there is any emotional or moral issue involved. Scolding, urging, excitement, and increase in attention over the new food are all likely to set up inimical eating habits. If the child rejects the new food, nothing should be done about it, but when it appears again on the table, a small helping should be made available for the child. If he has a chance to become hungry enough, he will try the new food

sooner or later. If it is served frequently enough, without any undue duress, he will probably learn to like it.

PROPHYLAXIS OF CHILDREN'S EATING HABITS

Even the most normal child may develop some freak eating behavior, if only the rejection of a single food. In problem children rejection may reach the proportion of purposeful starvation which has, in some cases, even resulted in death. In the normal child there are a few special problems which are frequently observed. They are (1) rejection of a single food (2) dawdling (3) restlessness (4) finicky eating (5) chronic refusal of food.

While all of these types of behavior come from more or less similar basic causes, namely, bad training or bad parental attitude, there is nevertheless some variation.

Rejection of a single article of diet may be physiological or psychological. If it is physiological, it is well to look for an allergic situation in the child. If it is psychological, there may be innumerable causes. Explosive behavior on the part of the parent at the time that the child is eating a certain bit of food may turn the child against that food. Overdramatizing of a certain article of diet has proved to be harmful. For example, a child is told that if she does not drink enough milk she will never grow to be as big as her older brother with whom she has a rivalry. Since she feels that she never can compete with this older brother anyhow, she sees no reason for drinking the milk and completely rejects it.

The disliked food may have been given to the child at a time when she was mentally strained or tired; hence it was undesired, but because of family pressure she ate it. She disliked the whole situation, so a complete aversion was developed.

Temporary aversions are not important. Sometimes unpleasant happenings have occurred just before a meal and a child projects his attitude on to a particular article of food.

He may have been punished and because he knows that his mother wants him to drink his milk he reverses the punishment on her by refusing it. Unfortunately too few mothers have the ability to recognize that this situation exists.

Dawdling is another problem. It is usually found in children of four to six years, or with mental ages of four to six, who, when given even rather small portions, complete their meal after everybody else is finished. They stay at the table for a long time and no amount of urging or attention will do any good. As a matter of fact, urging and attention or driving such a child produces only temporary speeding up and easily defeats the purpose of the urging.

Often a child is slow in eating because he has been given too much to eat and has become discouraged.

Another reason for dawdling may be that the child is preoccupied with other things. Although the dinner table itself might not be interesting enough to make the child dawdle, nevertheless, he may be daydreaming and thinking about other experiences. The matter of eating becomes not only one of secondary importance but, in some instances, one of no importance whatsoever. Usually a child who daydreams so extensively is lacking in affection or in interesting things at home. The only way to handle such difficulties is to survey the whole home situation with regard to interesting playthings and injecting the parents strongly into the life of the child. Too often children who dawdle at the table are those who frankly do not have enough attention and affection from their parents.

Another type of dawdler presents probably the most serious problem that can confront the psychologist-nutritionist, though usually the problem solves itself. This dawdler becomes so much interested in what is going on at the table that he cannot pay attention to his food. A great deal of table talk, excitement and joviality at the mealtime have been recom-

mended as good environment for proper digestion. If the child is surrounded by happy, laughing people who talk about amusing things and to whom eating is secondary to entertainment, the child may lose interest in his food. The elders have learned to eat mechanically while the byplay goes on, but the youngster who has not yet learned to do two things at once is left behind. Should we put such a child in a room by himself where he will miss all of this pleasantness, or should we hope that sooner or later, he will become so hungry and so adept at doing two things at once that the problem will be overcome? Probably each case is specific in itself and must be dealt with individually. Such dawdling can be corrected sometimes by allowing the child to eat most of his meal away from the family table and to come to the table for dessert or at some time during the meal to finish with the rest of the family. It is unfortunate for the child to be deprived of the pleasure of family gatherings if such sacrifice can be prevented.

Another type of dawdling occurs where there are a number of relatively undisciplined children in a family or where parents suppress themselves in their interest in what the children have to say or do. Although in this case the attention-getting is through no fault in the parent-child relationship, it is, nevertheless, still present and a problem. Where there is a great deal of sibling rivalry, some children will begin to shout and talk loudly in order to attract attention to themselves, while other children will make faces and play.

If parents let children hit their own pace and eat and talk when they are so inclined, as many parents do, there may be some delay in the eating, but this type of dawdling is fairly easily corrected.

Dawdling is usually corrected by having some goal at the end of the meal. Sometimes just a simple suggestion that the meal has to be done at the time the hour hand gets to a certain position on the clock is enough; permission to go out to play

as soon as the meal is done is very effective. The promise of reward must be strictly adhered to. When the child gets older, the evening's entertainment or amusement may depend upon his finishing his meal. The high-school child may be inclined to dawdle when he has to go to his room to study on a weekday evening, but will hasten through his meal to go to the movies on weekends.

Restlessness at the table definitely interferes with good nutrition and is usually due to a single cause: insufficient food or entertainment to keep the child interested. If the child is seated at the table to remain there for quite a while before a dish is put in front of him, or is required to sit at the table with a number of slow-eating elders and is compelled to wait, he will naturally become restless. The solution rests entirely with the ability of the parents properly to time the arrival of his food when he first comes to the table and to allow him a sufficient portion to keep him busy (yet not to overstuff him) while the parents are eating. If this timing cannot be set up properly, the child should be fed at a different time than that of the parents. We might note here, however, that from the standpoint of clinical psychology two mealtimes in the family are found not to be good. It is true that small children ought to be fed separately from the parents because they eat different food and because they go to bed much earlier than the adults do, but the additional labor that the mother must undergo in preparing food for the children at one time and for the adults at another creates a sufficient nervous strain to show up in poor handling of the child at mealtime. Often this strain cancels out the beneficial results in having him eat by himself.

The *finicky eater* is usually one who is demanding attention. Reasons for attention demands extend through the whole range of child guidance, but two are outstanding. The first is, as one might expect, the response to lack of security. The

child who is insecure, who is not sure whether he is wanted by his parents, or whether other children in the family are preferred to him, finds that one way of getting the necessary attention if not the affection is by making a big fuss over food.

Perhaps he will say that there are certain articles that he does not like. Then one has to differentiate carefully between his rejection of an article of diet because of some earlier association and the pretended dislike of a food he really likes in order to get attention.

Very often we find this finicky behavior attached to milk because we have made it almost a diet fetish. The child whose father pays little attention to her will refuse her milk, knowing that the father will bellow at her that she must drink it; this attention from him is often more than she might have had for several days. Perhaps the child will pretend not to want anything to eat although he is quite hungry, and after the meal will steal out to get some food.

Another type of finickiness is a response to overprotection. Parents overprotect a child for a number of reasons and the child, demanding cumulative attention, uses the various articles of diet or the whole meal as a means of getting this attention. Again some differentiation must be made. Such finickiness lasts over a period of time and it takes an expert to determine that the parents are overprotective. Something must be known about the parents or the family. For instance, is the child the only one that is likely to come to the mother who, therefore, treats it like a special jewel for fear she will lose it, or is there some other cause for maternal or paternal overprotection? This condition requires professional clinical analysis and study for treatment and cure.

If, on the other hand, finickiness is of sudden origin and there is no change in the family's emotional relationship, physical illness should be suspected. The appetite drops away with almost every one of the traditional childhood diseases; and

with every infection or other disorder that might affect children (except diabetes mellitus) the appetite is likely to drop, At first certain articles will be rejected, but favorite foods will still be eaten in quantities which compare favorably to those before the onset of the disease. When the disorder makes itself noticeable by other signs and symptoms, it is very likely that the appetite as a whole will drop off.

Finickiness may also represent a change in the emotional status of the family. A violent quarrel between parents or severe disciplinary measures upon the child or upon one of the other children with whom the child is closely attached may destroy the appetite for one meal or for several. If this emotional disturbance is coupled with overprotectiveness, a vicious circle of pressure-feeding will be established. The parent, disturbed over the child's loss of appetite, will try to force food, causing greater emotional disturbance which, in turn, depresses the appetite.

Another attention-getting mechanism which is a response to an emotional disturbance, due either to rivalry with one of the other children in the family or to parental rejection or overprotection, is *showing off* at the table. This behavior often goes hand in hand with dawdling and unless the cause is very deep-seated the treatment is simple and is merely the refusal by the other people at the table to pay attention to the clowning and other antics of the child.

Chronic refusal of food very often is a symptom of a severe emotional disorder and should be treated accordingly. From the standpoint of simple child feeding, it is always worth while to look into the nature of the food being served. It is necessary to see whether it compares unfavorably to that to which the child is accustomed or whether it is unpalatable. In the latter case, its rejection by other members of the family stimulates the rejection by the child under observation and also acts as an indicator as to its unsatisfactory nature.

THE ILL CHILD

There are certain psychological principles that should be taken into account when feeding a child who is ill. The first one is that the loss of appetite should not be made the prime consideration in feeding the child. It is to be assumed that when the disorder which is affecting the child has cleared up the appetite will automatically restore itself.

Many parents feel that by forcing unwanted but allegedly healthful food on the child they can clear up the physical disorder. Nothing could be less advisable. In fact, it is sometimes advisable to heed peculiar fads or fancies of the child who, during his illness, may make demands for special food. In such a case, if the foods requested are those which are not harmful, the ordinary rules of nutrition and of handling the child in the food situation might well be set aside. For instance, many sick children wish chocolate or ice cream rather than a full meal. While it would be foolish for the parents to allow the healthy child to substitute chocolate for a meal, if the sick child's stomach is able to tolerate the chocolate and very little else, it would be advisable to permit it.

It must not be forgotten, however, that the sick child learns very quickly to use his illness as a tool to get away from all unpleasant training procedures. The solicitude of the parents and their obvious anxiety makes it very easy for the child to gain leniency from the parents regarding hitherto refused articles of food.

Frequently serious spoiling of the child may begin with even a very brief illness. If possible, the feeding routine should be kept up, but it should not be an obsessive matter with the parents. The mother should not sit by the bedside, as so many mothers have done, and say, "Here, eat this, it's good for you," or, "The doctor says that you have to eat this or else you won't get well." While to the enlightened parent such behavior may

be ludicrous, any pediatrician has experience with the train of bad eating habits which result therefrom.

A general rule might be given: *established habits should be relaxed in order to maintain the sick child's nutrition* even if a very special effort must be made. Nevertheless, good habit training should be maintained as systematically and as completely as possible.

There is one last consideration which might be borne in mind during childhood sickness: that is, that there are certain stimulating foods for any particular child. If a child loves these foods and is given them, he may eat large quantities of them. Ice cream is a common example, and as a rule is a harmless food, so that large amounts may be given. This food itself carries with it many valuable nutrients as well as having its stimulating effect.

PREVENTION AND TREATMENT OF CHILDREN'S FEEDING PROBLEMS

One of the most useful methods of treating minor feeding problems in normal children is to provide the opportunity for them to eat with other children, particularly in a controlled environment such as the nursery school. It is always a source of great pleasure to parents who do not know of this phenomenon to see a child, previously a finicky or poor eater, go to nursery school and eat large amounts of the food rejected at home. The suggestive influence of seeing other children eating avidly is usually sufficient to take care of the problem. Children who sometimes seem to be very poor eaters amaze their parents when, within a day or two after admission to the nursery school, they ask for second and third helpings of foods which the parents assumed that they despised.

Another error occurs in handling peculiar eaters when the parents assume that the child dislikes certain foods because he rejects them once or twice. Rejection of food due to association

of an emotional upset with it is quickly overcome when the child sees that he will be at a social disadvantage if he does not behave in the nursery school as the other children do.

Occasionally there is a *negativistic* child, one who does the opposite of that which is expected. Negativism is often an attention-getting mechanism, but more often it is merely a developmental phenomenon. The child begins to learn that he is a personality, that other people pay attention to him, and one of the easiest ways of asserting himself is to do the opposite of that which is demanded of him. The refusal of food is just as much a part of this negativism as dawdling over dressing, refusal to come when called and other behavior which shows the child is learning that he exists as a distinct person and that he dares to come in conflict with the rest of the world to have himself recognized.

A minimum of discussion about food in the home is worth while. We do not mean by this that food should not be acknowledged as being delicious at the table, but it is just as well if the child is not exposed to a great deal of discussion about food. Even such a remark as one sometimes hears made by a thoughtless father that the meal at a hotel is better than that which he gets at home sets up a whole train of associations which are bad in so far as the child's feeding attitude is concerned.

Discussions of the amount of drudgery that a loved mother must put into the preparation of food is also inadvisable. Sometimes it is very difficult for parents to be alert to such expressions as this, but it is wise to refrain from discussion of food when the children are present. When it is necessary to talk about food it is well if the atmosphere is one of pleasure and such as to stimulate the child to want to eat what is set before him. Ada Hart Arlitt tells of a friend of hers who once said that he wished that spinach were crossed with poison ivy so no one would have to eat it. He made this remark before three

children; and all three children refused the dish and two of them had temper tantrums when attempts were made to make them eat it.

Mrs. Arlitt also tells of such remarks as, "I have always hated milk, it makes me sick," or, "Why should I eat that green grassy stuff that you call spinach; I hate it," or, "Green beans look like worms; I don't see why you have them." Remarks of this sort are obviously not good to encourage a broad eating program in any child.

When an eating problem arises, it is well to look into the physical condition of the child. The child who is ailing even in a rather vague way may have a perfectly good physical reason for this finickiness or refusal of food. A biannual or more frequent checkup by a physician is always good, particularly if the child has a feeding problem.

The example of those about the child, in addition to the remarks that are made, weighs heavily in the child's mind. The mother who allows her crusts or her green vegetables to lie on the plate, is subject to the closest inspection and imitation by her children, and it is not long before her exact behavior is imitated by them. Only too often mothers who have numerous and severe food rejections or odd food habits are found to have other neurotic tendencies which, though mild, will affect the ability to handle the child.

Table conversation and behavior at the table are always stimulating to the child. The child learns to respect his broadly educated father from the comments that are made by him about things that are going on in the world, but unpleasant topics of conversation, particularly those which are fearful or frightening, should never be a part of the table conversation. The frightened child may not show it at the moment, but the next time that the associated food is brought to the table he may reject some of it or even have a vomiting spell. When we try to explain a food rejection, it is difficult to see where

these connections lie; a parent is fortunate if he can remember what the child was eating when the fearsome story or the frightening event was told.

The playing of games at the table is a matter of dispute among those who have reared children under scientific observation. Sometimes the playing of games, particularly those where there are races to see who will finish the plate first, or when toast floating in warm milk is identified with boats, proves to be too stimulating to aid the building up of an appetite for the food. In the case of dawdlers, or those who are distracted from the food, the reverse is true and games which direct the child's attention toward his eating are useful.

Adult eating practices may develop out of such games. In one section of Detroit stirring up of bits of toast in soft-boiled eggs is quite common. Tracing back this practice in the community, it was found that parents in the neighborhood communicated one to the other the idea that children would eat eggs if they were allowed to float "boats" on them. Hence, this procedure was adopted so that it aided the children in becoming habituated to eggs. This policy and means of eating eggs are carried on through life; there is no harm in this that we can see.

The use of a clock to terminate the mealtime is good. In the case of the dawdlers it is well to remove the plate promptly when the time limit is reached. If the child does not have enough to eat on several occasions, he will hasten almost voluntarily.

A child who has no physical disorder and who has no serious emotional conflict which interferes with his eating can often be stimulated to eat by the removal of his plate after a reasonable time and its restoration to him on successive meals until he cleans the plate. The child becomes so hungry if he is kept from eating between meals that when he comes to the table he will eat almost any kind of food. One word of warning is

necessary: the food must be kept appetizing if it is to be carried along until the child eats it. Stale, mushy, dry foods will defeat the purpose of this process.

Among younger children, it is necessary to bear in mind that what may be called emotional weaning is necessary. A large number of children's feeding problems arise from the fact that the mother seems to be unwilling to see the child grow up. She continues to feed the child long after it is necessary, whereas the child himself would like to learn to feed himself. Serious conflicts come from this situation. Nursery schools sometimes find children who are three or four years retarded in their eating because the parents insist on feeding them and treating them as though they were much younger. Some of this infantilism comes from parental ignorance and not surprisingly. One must be on the lookout for an emotional situation when the child is retarded in the actual mechanics of feeding.

The correction of children by liberal use of rewards seems to be effective in controlling the lives of normal children, but punishment should be used relatively sparingly. If a child eats well, he deserves praise and the authors can see no particular objection to candy as a specific reward if it happens to be of a really nourishing type and not just a mass of carbohydrates. Yet one must be careful not to use a dessert or candy as a reward for cleaning the main dish of vegetables and meat, for the dessert should be considered part of the whole meal to supply essential food values, and the child should not be deprived of it because some other part of his eating activity needs correction. If a mother uses dessert or candy for either reward or punishment, she must be very careful because the possibility exists that the child will put too much emotional value upon the dessert and may reject certain less interesting articles of diet.

In cases of severe feeding disorders it is necessary to secure

expert advice from both psychiatrists and psychologists. We cannot expect the child who is intellectually retarded to learn to feed himself properly or to be socialized in the eating situation as well as a brighter child. On the other hand, a very alert child will offer problems to the parents which require guidance beyond that of the physician. Certainly if emotional conflicts are such that the child is losing weight for no physical cause, it would be well to have professional help.

Lastly, it is well for the parents not to be discouraged if the child seems to develop faulty feeding habits or eccentric attitudes toward food. Children can be retrained and such retraining is not nearly as difficult as attempting to deal with the problem later in life. The alert mother, the alert teacher, and the physician, separately and together, will recognize the need for special training in the case of the problem eater. Where the elements of weakness occur can be determined by checking over the following lists of criteria for good nutritional training of children.

RULES FOR THE PROPER FEEDING OF CHILDREN

Ada Hart Arlitt, Miriam Lowenberg, and Rowena Schmidt Carpenter have made lists of rules which we have combined here in a single guidance plan. They are:

1. Set a good example. Eat everything on your own plate.
2. Begin training early.
3. Serve new foods in very small portions until the child gets used to them.
4. Never talk of your food dislikes or those of any other member of the family within the hearing of the child.
5. Do not discuss the child's whims or food interests.
6. Develop the attitude that a good appetite and liking for all foods is not only a thing to be proud of but it is expected.

7. Expect the children to eat.

8. Keep the diet simple, with few sweets. The high seasoning of food is generally frowned on, but there may be some place for it in increasing palatability.

9. Do not let the child eat between meals unless he needs additional food. If the child appears to be hungry at regular times and if between-meal eating does not diminish normal appetite, fruit juices may be given. In the case of active growing boys and girls of school age, an afternoon snack high in carbohydrates gives the child extra energy for outdoor play until supper time. This arrangement, in turn, aids the child in forming good nutritional habits so that he is quite hungry when he comes to supper.

10. Remember that each child is an individual. Do not expect all children, even of the same age, to have the same taste for food, or even to eat the same amount.

11. Be sure that the child's seat at the table is comfortable. Adjust the seat so that his feet touch the floor, his legs are under the table properly and so that his balance is good.

12. Foods must be attractive to children and prepared so that the child can handle them in a way commensurate with the skill in eating which he has developed.

13. Provide dishes and utensils which are suitable for the hands of small children.

14. Have a cheerful and happy atmosphere at mealtime.

15. Encourage interesting and pleasant table conversation among children who are old enough to be able to eat and talk at the same time. There should be no discussion of personal likes and dislikes but praise for an excellently prepared meal whenever possible. Dr. Lowenberg suggests talking about the foods themselves, where they come from, as an interesting and stimulating subject for the child.

16. Parents should not be disturbed by spilling. Bibs and

other protectors should be provided, particularly for little children.

17. Children should be rested and relaxed before coming to the table.

18. A time should be set for the meals, and no distraction should be allowed during the meal hour.

19. Whenever possible, the child should be allowed to feed himself, even at quite an early age.

20. Parents should be consistent in handling the child. Misbehavior, clowning, and pranks should not be punished one time and laughed at at another. One must not forget that the child whose bad behavior with regard to eating is laughed at only once will use that conduct again and again as an attention-getting mechanism.

21. On the other hand, the table should not be made a place for discipline. Children should not be punished by having food they like taken away from them, although they may be rewarded by being given special foods if they do well with others. Bad behavior in relation to matters other than food should have no carry-over into the mealtime activity. The punishment of sending a child to bed without supper is inhumane, seldom accomplishes anything in the way of child guidance, and may very well break down a good feeding attitude. The table should be a place for companionship and pleasure and not an inquisition.

22. The parents should agree on a division of authority about the child's eating behavior. It is usual to allow most of the control, discipline, and guidance to remain in the hands of the mother, although the mother can reasonably expect that the father will bring misbehavior to her attention for her to correct. On the other hand, the father should not be so aloof from the situation that he is a Court of Appeals to whom the child turns when he feels his mother unkind. The father should be an ally of the mother and a friend, protector, and lover of

the child. Only too often the father will break down discipline because he feels that the mother is too harsh. This is a matter to be decided elsewhere than at the table and the correction should occur at the next exhibition of bad conduct at the table.

IV

Feeding Problems Due to Psychological Maladjustments

ALTHOUGH parents often become disturbed because their children have faulty feeding habits, are fussy at the table, finicky perhaps, or seem to have but fair appetites; yet these are really minor problems and seldom rise above the level of the parents' ability to correct them.

Mothers often consult doctors, even psychologists, to learn what is wrong in the training of such children, but they seldom find the problem is so grave they cannot handle it and must take the child himself to a specialist. A mother rarely considers the eating problem sufficiently severe in itself so that it lives in the forefront of her attention; she may be well aware of it, but usually there is something else of equal or greater importance, for which she needs advice.

On the other hand, in the case of adults, nutritionists become disturbed over the faulty feeding habits of large numbers of people. Extensive surveys are made from time to time to determine how the people of various communities or various occupational groups spend their food money. Recently the Committee on Food Habits of the National Research Council has been preoccupied with the differences among foreign groups with regard to the foods they eat. But all of these problems are not intrinsically as severe in the case of individuals as those that bring patients to the attention of the clinician.

Because of the relatively small number of food clinics (as distinguished from routine outpatient care of persons suffering from metabolic disease), neither the physician nor the

nutritionist has become aware of the psychological significance of certain changes in attitude and feeding behavior. One of the more common forms of abnormal feeding behavior is overeating (with resultant obesity); the physician, as well as the nutritionist, often proceeds on the idea that food consumption must be cut down, without considering the basic premise that there may be a good psychological reason for the overeating. Such is the case, certainly, when there is no obvious physiological fault, such as hypothyroidism, to account for the excessive appetite.

OVEREATING

There are two distinct groups of individuals with excessive appetites. There are the ravenous eaters or those with hyperorexia, who cannot seem to get enough to eat, but do not necessarily require a tremendous amount of food at one sitting. The second group are those with polyphagia, who eat excessively at mealtime. In some organic cases, particularly in diabetes mellitus, the two are combined. In this order, the large meal in itself is unable to satisfy the tissue hunger for sugar; hence the need for food remains constant in spite of all that is taken in the stomach, and successive ingestions of small amounts do not correct the situation.

If ravenous appetite is of psychological origin it easily produces obesity. If it does not, one must suspect immediately that some physical disorder is present because the metabolism of the normal person cannot withstand very much excess fueling without having to store away the surplus fuel elements. Heavy eating can be modified to some degree, of course, by a compensatory amount of activity, but the person who has time to devote his attention and his interest to food often does not have time to devote an equal amount of attention to its utilization in his body. The gourmet who is also an athlete is very fortunate.

The person who is fat for a nonphysiological reason can have his ravenous appetite created by a number of psychological situations. The majority of these exist in the emotional relationships of his family.

Bruch and Touraine have made an excellent study of the family settings of obese children. In their study they cite forty cases of overweight children, and throughout this extensive study one sees the significance of the ravenous appetite. Almost every type of home problem is either created by the ravenous appetite of the fat child or contributes to the child's protest against the situation in which he finds himself.

Beyond the problem of the obese child, there are certain considerations about excessive appetites that deserve some attention. In the first place, mothers who have problems of their own, either economic or emotional, have a tendency to find in their children excuses ("rationalizations") for overprotecting or for giving a great deal of attention to the child. Occasionally overprotection or excessive attention is observed in the parent of a child who ordinarily does not eat excessively. If the child does eat more than usual, an unusual attitude should be suspected on the part of the parent.

Such problems have been found most frequently in homes which are not too well situated economically. When there is trouble getting enough food, particularly during an economic depression, parents may complain that an individual child, particularly a rejected one, was too great an eater. Careful study of what one such child actually ate failed to reveal that he took more than he needed; certainly the absence of obesity was extremely significant. The carping, critical mother in compensating for her own deficiencies would seize upon an occasional bout of overeating, which occurs in the lives of most healthy children, as an example of how the child chronically overate. A study of the daily diet failed to support this. The mother cited party after party where the child ate exces-

sive amounts of cake, sweets, and other tasty things that were offered to him. It did not occur to this mother, either because she did not know the normal behavior of children at parties or because she was looking for something to justify her complaints, that excessive eating under very pleasant conditions was a normal phenomenon and could be discounted.

To have a mother cite such occasional overeating as a symptom of a behavior disorder reveals at the very beginning that she is a problem mother and needs to be dealt with, rather than the child.

It must not be forgotten that the ingestion of food is a symbol of security so that, in order to feel secure, the insecure child feels a great need to eat. Often this insecurity is not the child's but the parents'. Immigrants who, after having lived an unpleasant, unhappy, and even dangerous life in Europe, have come to the relative security of the United States and want to forget the insecurity of their earlier days have a common wish to see that their children in turn are not left to feel insecure.

For this reason, it is often the case that the maladjusted parents whose adult life reflects family conflict leading to insecurity, or the effect of external influences such as famine, racial prejudice, or lack of opportunity on the part of their own parents, should want to use this symbol of security in giving their children what they themselves did not have. It is not surprising, then, to hear an admission from a mother who has an obese child, "I never had enough to eat when I was a child; now I want my daughter to have enough."

The varieties of insecurity that will lead to the overfeeding of a child are unlimited. They may exist both in the parents and in the child, or in either. The child, hearing a discussion about the parents' insecurity, often identifies itself with the parents and, for no apparent good reason, also feels insecure. The parents, projecting their insecurity into the gorging of

the child or at least the encouragement that he get enough to eat, may have derived their insecurity variously: perhaps, as we mentioned above, from conditions during their own childhood; perhaps from conditions during the marital life of the couple. The father who has never been able to earn a good living and the mother who seems constitutionally unable to handle funds are the most likely to use what funds they have to surfeit a favorite child.

Another condition, somewhat allied to the one last given, arises from family conflict. The mother who is rejected by her husband or who rejects him may compensate by overprotecting the child. Since she lacks the love of her husband, she may do everything to get the love of her beloved son to replace that of the husband; on the other hand, if she rejects the husband, she may reject the offspring but, in turn, overcompensate for her rejection by showing an excessive amount of affection.

This behavior may be due to a reaction to her feeling of guilt about the rejection of her husband, particularly in the sexual sphere. The woman who no longer can stand her husband sexually sometimes identifies either the son or the daughter with that husband; yet in her effort not to show her feelings against this child (because she knows that the community, or her friends, or even her life's training would not allow her to take the attitude of rejecting the child also) she goes out of her way to see that the child is treated properly. Unfortunately, her judgment is so warped by the emotional situation that what she means by proper feeding is not dietetically acceptable, hence she forces upon the child food that he does not need in order to reassure herself that she is doing her duty by him.

While an excess ingestion of food may be due to the parental attitude, it requires some co-operation on the part of the child to eat excessive amounts. Sometimes this co-operation is passive and at other times is active.

In the case of passive co-operation, the aggressive mother may have sufficiently subdued the child so that he acquiesces to her demands and is soon habituated to excessive amounts of food.

The oversolicitous and overprotective mother does not necessarily behave thus toward only one child. It is not exceptional to see all of the children in a family over the normal weight, although not exceptionally obese. It is found that the mother prides herself in her chubby children either because cooking is her particular forte or because she has feelings of insecurity which she wishes to prevent the children from having by providing tasteful meals in unnecessarily large quantities. Seeing so much food around often stimulates children, especially the nonaggressive type, to eat all that is put before them. If the training procedures described in Chapter II are followed the normal child may eat more than he should because the situation is such as to encourage an excessive appetite.

The example of large eaters about them will also have an effect on these children, but aside from their excessive passiveness when food is present, they must not be considered particularly abnormal. It is the attitude of the mother which, for some reason in her own personality, forces food upon the child, who is willing to eat it.

Another type of overeater is the aggressive child who solves his emotional need by excessive ingestion of food. These children are of several emotional types. Perhaps the most common overeating child is the one who is actively responding to the mother's attitude. Either he has felt the need for security in the mother's insecurity, or has rejected the father because the mother has, and has thus adopted the mother's emotional attitude. If the mother can express her wish to give security or to give love to the child by petting him, by giving him presents, and by overfeeding him, the child's own aggressive attitude

toward his love wishes and his hates makes him go farther than the mother would naturally demand. Even when he is out of touch with the mother his aggressiveness, which is a reaction to the family situation, expresses itself in excessive eating.

Identification of the child with someone whom the mother has loved very much or whom she has rejected may be responsible for excessive ingestion of food. For instance, the mother may have had a very beloved brother. The child, hearing about this beloved brother, who was a hearty eater and perhaps overweight, seeks to emulate him and prides himself if he should be overweight; attempts, by the rejected father or by others who conflict with the mother's emotional picture, to control his appetite serve only to cause excessive eating.

Even when the family emotional setup is not known, extraneous influences may turn out to be vicious and add to the excessive eating. In one case from St. Vincent's Hospital, an obese girl was chided by the college physician for being heavy and told that she ought to know better; she left the physician's office to eat the largest meal that she could obtain in a restaurant. This patient told the dietitian that whenever she has a feeling of resentment or unhappiness, she is able to overcome this feeling by excessive ingestion of food.

In the lives of the mothers who are working out their own emotional conflicts on their children by overfeeding them, there is also a tendency to give attractive articles of food so that the child will not reject them and through the rejection of food reject the mother. Very often, since children's preferences run to sweets, the foods which are given are not those which balance the diet but rather those which appeal unwholesomely to the palate.

In Bruch and Tourain's study of the obese child, it was found that many fathers were weak and submissive and were unable to give any positive and manly guidance. The mother exhibited an overt display of solicitous protection to cover an

underlying attitude of hostility and the food was highly charged with emotional value. The offering of food represented to many of the mothers the only single way to express the affection and devotion which they had for the child.

It might also be noted that since these mothers were often overprotective, they did not allow their children to engage in dangerous or very active games, which, in turn, caused the children to be more or less sedentary and prevented the proper utilization of the excessive fuel food which was ingested.

ABNORMAL APPETITE

Abnormal appetites have many ramifications which are seen particularly in abnormal individuals, children and adults, who are mentally defective or suffering from mental diseases. Such cases will be discussed briefly later. On the other hand, abnormal tastes are seen in relatively normal people in an abnormal situation. Sometimes the demand for a special article of diet occurs during pregnancy. It is to be suspected that these articles of diet satisfy the consciously unrecognized biological need for a certain food, but they may also symbolize a psychological need.

The unusual nutritional demands of pregnancy leave one somewhat hesitant to say that the pica or perverted appetite of this condition does not have a physiological origin, but cases do come under the observation of the psychiatrist where the food perversion is definitely of psychological origin.

For instance, in a case where the father of a child was rejected, the pregnancy was made an excuse for justifying excessive demands upon him. The mother wanted new furniture, wanted elaborate equipment for the child when it was obviously beyond the family's means, and in other ways expressed her hostility toward the father. Since it was obvious that such demands could not be met, most of the expression of hostility took the form of excessive food demands. At unreasonable

hours the father was sent out to buy food which the mother obviously did not need. While she was advised by her physician against excessive eating because of a tendency toward obesity, she, nevertheless, kept on making excessive demands and was disturbed at night and sleepless until the husband would search the community to find what she needed.

Freak articles of diet are much more likely to be responses of abnormal emotions than of physiological demands, yet the occurrence of chalk-eating among pregnant women would seem to be definitely a response of the body to the excessive need for calcium which occurs during pregnancy.

Foods fads as discussed in Chapter II often occur but are merely the result of poor training or cultural conditions. Many husbands are considerably disturbed over the fact that their wives make such a poor choice of food. It so happens that the husband is trained in better eating habits than the wife and for this reason recognizes the discrepancy. The wife's bad eating habits in themselves are not significant.

Unusual appetites in the child, too, are not particularly significant. During the period of increasing awareness of the environment through which the child passes between the second and fourth or fifth year, he has a tendency to try to investigate everything that happens to and around him. If he should, therefore, try to taste feces, drink urine, eat dirt from the garden, or chew up a worm, acorn, or some other article which we consider unhealthy or perhaps beastly, it should not be a matter of concern.

It is particularly true that the parent should not be concerned about the eating of unusual substances if the child does not repeat the act or if mild supervision quickly cures the tendency so far as any one object is concerned. Often the child on being told that a substance is not good for him in a calm and informative voice will discontinue the eating of it immediately. Sometimes, the eating of despised (or wholesome) ar-

ticles of food which produce emotional reactions on the part of the parent gives certain satisfactions to the child.

The old saying, "Nobody loves me, I'm going into the garden and eat worms," is an expression of useless pica as an attention-gaining instrument. The wish of the child who made this comment is immediately to gain attention and to gain reassurance that he is loved, and even the horror which is shown by the parent who stops the child from eating worms warms the heart of the youngster who may be craving a little extra affection.

In instances of this sort it has been noted that pica occurs very frequently in cases of sibling rivalry, where one child demands more attention because he believes truly or falsely that the other one is actually a favorite. By eating despised or discredited objects he often finds that he has taken a great step forward in gaining prestige in the eyes of the family. This is true even in adolescence and in older persons, for the fish-eating fad (see page 45) is undoubtedly an attention-gaining phenomenon on the part of those who indulged in it.

FOOD REJECTION

One need not be surprised if in the case of a young child certain foods are rejected (anorexia) and others are eaten joyfully. There are differences in tastes, differences in the milieu of the feeding, and possibilities that the food might be too hot or too cold or for some other reason be simply unpalatable.

During the lifetime of the individual it would be surprising if some occasion did not occur when food is rejected. When a person is sick he rejects food, whether he be child or adult, unless he has some ailment which demands more fuel for the body. When such a sudden rejection of food and refusal to eat occurs in a baby or a child, it is usually a symptom of one of the childhood disorders and calls for the attention of a doctor.

When, however, the rejection of food becomes chronic, or

when it becomes directed toward particular foods or particular situations for eating, then the problem is a psychological one. Food rejection can, of course, arise in infancy. Infants who are not properly trained to nurse may reject food for a considerable number of days, and then only careful watching and adjustment of the situation to the child will lead it to eat.

Salzbach cites such a case, and he points out that the baby in question took several weeks to learn to nurse from the bottle and then would only nurse when asleep and in the dark. Finally it began to nurse when awake and then in the light; an eleven-year follow-up indicated that this early tendency had no untoward effect later in the child's life.

Food rejection is not necessarily a simple inability to eat. It may also take the more subtle form of vomiting. But in either instance the refusal of food may have a psychological origin, to be discovered only after all possible organic causes have been excluded.

Too often the psychologist is prone to believe that faulty choice of food, finickiness, vomiting, and rejection of certain foods are due to the wrong feeding habits, but this opinion is not necessarily correct. There are numerous food allergies which should not be ignored.

Studies by Alvarez and others indicate that there are certain foods which some individuals definitely cannot eat without pains, discomfort, formation of gas, or vomiting, but these findings should not require the psychologist to overlook the possibility of suggestion and other psychological dynamics in the rejection of even these articles.

The child who hears that his parent cannot eat onions is very likely to become sick either by suggestion or because of identification with the parent; it may take a complete re-education to overcome this reaction. On the other hand, since as many as a quarter of the population do reject this particular article

of diet, or have some *physical* reactions, it would be unwise to discount the possibility of allergy.

It would seem to be a point of wisdom, particularly in the older child and in the adult, to humor this particular type of food prejudice or aversion. There are few foods for which a substitution cannot be made in order to provide an adequate diet, hence the forcing of any particular food or foods would be either physiologically or psychologically inhumane, or both. Making an issue of the rejection of certain articles of diet by the older child is apt to set up a whole train of behavior disturbances which are not outweighed by the success in getting the child to eat a certain article of food occasionally.

Strangely enough, only recently have the authors begun to believe that food fads in older people, particularly if they cannot be traced to cultural influences and habits of eating in the family or to identification with loved or hated persons, should be treated as physiological weaknesses.

The important point in comprehending the significance of physiological or psychological aversions, from the nutritionist's standpoint, is to see that proper substitutions are made where rejection of a food or foods might interfere in the proper balancing of the diet.

Unfortunately this attitude is foreign to the customary procedures carried on in the prescribing of diets because the physiological outweighs the psychological in the purposes of the prescribing physician, and the administering dietitian has to adapt the patient to the prescription rather than the prescription to the patient. Nevertheless, although the psychological side is so important, food rejections should first of all be considered physiologically rather than psychologically.

Of more importance than the occasional rejection of isolated articles of diet is the tendency to reject *all* foods either at various times or *some* foods for long periods of time, thus bringing

about partial starvation. Most massive food rejections of this sort are psychological in origin. There are few organic diseases that can be considered of long enough standing that the appetite as a mass phenomenon is affected by them. Instead, the person, be he child or adult, who eats too little, has vomiting spells after a meal, or refuses to eat over periods of time with no organic basis, requires definite psychological study. There are two main psychological trends responsible for the major loss of appetite. The first is a lack of love and affection, and the second is an attempt to escape from an extremely tense emotional situation or a reaction to rejection.

Children in institutions or in inadequate foster homes manifest a tendency to eat poorly. This lack of appetite has been ascribed to loss of security through lack of affection. Often, when such children are placed in foster homes where they are given a great deal of love and care after having been in an institution where they have been treated impersonally, they develop an appetite and overcome their basic aversion to food. Bakwin has shown in his studies that children who have been taken into the hospital and are away from the loving and tender care of their parents tend to develop a listless and apathetic mood in which they lose their appetite and sometimes even starve themselves.

Although these children may have become considerably emaciated, when they return to their parents they make dramatic gains in weight, indicating how important the wholesome home life is to the child in the matter of building up and developing his appetite. It is our belief that this type of self-starvation is somewhat different from that which is found in the sick who refuse food because of their physical illness. A child in the hospital may feel neglected and lonely: basically what he is missing more than the physical presence of the parents is the aura of affection which they carry with them.

The other type of anorexia, due to an attempt to escape

from certain problems and situations, may be very mild or it may extend to a degree where it becomes a definite clinical entity, *anorexia nervosa*.

In its allegedly mild form it is a simple attempt to escape from a situation, as seen when a girl refuses a dinner date because she does not like to be seen with the rejected individual. This reaction is probably normal, and the only way that it comes into the food picture is the fact that eating is involved. Nevertheless, many good dinners have been missed by such persons because of peculiar attitudes toward those who invite them, and in this respect the rejection of food is significant.

In the extreme degree anorexia nervosa still remains in question, that is, whether it is or is not an actual clinical entity. Certainly it exists clinically, for most psychiatrists who have a psychosomatic practice have seen cases of young women who have starved themselves to such an extent that they are wasted, have an excessive growth of hair, and have an amenorrhea. The basis for such a syndrome has been worked out in considerable detail, and minor degrees of the mechanisms involved lead one to comprehend the possible causes of less serious cases of food rejection.

In cases where the mother is severely rejected by the patient, any emphasis upon the food problem often leads to marked eating inhibitions and often to definite anorexia. The mother who, for instance, becomes oversolicitous and dominates the child during eating time may find that the continued explosion of emotion and the conflict of wills quickly results in the child refusing to eat at all. Such children are found in families where they are quite obviously rejected or where they have been in the care of an agency or institution. Oftentimes such children are abandoned emotionally by their parents and are somewhat like the institutional children mentioned previously.

Sometimes there is an overstressing (by nutritionists or pediatricians) of the food side of the child's life so that the

interest of the parents becomes so marked during mealtime that the child becomes extremely tense and, because the parent is rejected, the child rejects the idea of satisfying the wishes of the parent. The recent trend toward interest in foods, vitamins, and nutrition has led to an increased amount of fussiness in the parents of young children, resulting in this type of rejection of foods.

The treatment of such types of food rejection is simple. A child can be removed from the home, or, if the parents have sufficient self-control and can divert their minds from the problem of feeding, the child can be left alone to feed himself and to gain back his natural appetite.

There is another group of children who, desiring to escape from the situation in which they know they are rejected, behave in such a way that they will be left to their own devices by the parent who rejects them. For example, a mother in rejecting a child places him in a boarding home. When she visits the boarding home she has a tendency to criticize the way the child is being reared in order to show that her own attitude is superior and to make the child think he would be better off at home. As a matter of fact, the child is better off where he is because he has been rejected. Nevertheless, the mother, as a primary consideration, is apt to criticize the food. With such a child, there may be two alternatives. The mother could bring food and the child could eat it, rejecting the food of the foster home, which would be an attempt on the part of the child to get into the mother's good graces. The second possibility is that the mother's criticism of the food might cause the child to reject all nutriment, that is, to manifest anorexia nervosa. Dr. John A. Rose cites a case similar to this, in which a child was placed in a special boarding home and the mother sought work. The mother would visit the child and imply that the child was not getting enough to eat and bring her food. The child began to stop eating and had to be put to bed because

she was so weak. The child remarked when she was playing with her dolls that if a person did not eat he got sick and did not have to grow up, so that the picture of eating–living–love-by-the-mother was shown to be a dominant influence.

Dr. Rose also cites the case of a mother who had guilt feelings about not wanting the child and who resented her son for the trouble that he had caused from the time he was born. This boy used eating as a weapon with which he could control his mother through these guilt feelings and, as Dr. Rose says, it is almost as if the child would say, "I'll force you to care and be safe by not growing."

Very often children whose parents obviously do not like them will find that they do not have to come to the table or do not have to be in contact with the rejecting parents if they make enough of a fuss about eating. Therefore, they refuse to eat and escape the need for seeing or obeying the rejecting parents.

In most marked cases, refusal to eat seems to be of distinct symbolic value. In the psychoanalytic literature it has been found that the fear of oral impregnation is an important motive in certain types of conduct, that is, some women develop an excessive fear that they will become pregnant from kissing or through some other manifestation of the ingestion of material from the other sex.

Usually this belief arises in childhood when the young girl is innocent of sexual physiology, and in her speculation of about how life goes on from generation to generation develops the belief, either spontaneously or through false information derived from others, that kissing causes pregnancy. Even after the matter has been properly explained, things passing through the mouth, such as food, remain symbols of possible pregnancy. This belief goes on and is furthered by conflicts in the home, rejection or other attitudes on the part of the parents. Because of this neurotic concept, the young girl refuses to eat and de-

velops the typical syndrome of anorexia nervosa. The symbolism may be present in less serious cases and should always be considered in the psychological treatment of those who refuse to eat.

There are a number of other psychogenetic causes for the rejection of food. Cases of gastrospasm and the esophagospasm have been cited where an individual could not eat because of some psychogenic cause. On X-ray, the spasm can be seen. A case is cited by Dr. William B. Fostner, Jr., of an individual who was worried about economic conditions and when the esophagoscope was passed to see why he could not swallow, he clamped down on it so firmly that it could scarcely be moved. When he was given reassurance about his economic situation, the spasm relaxed. It could be again produced by withdrawing the security that the earlier promise of an improvement in his job had produced.

Ulcers of the digestive tract are also frequently of psychogenic origin, and the treatment for such conditions may very well be based upon the psychological treatment of the basic emotional disorder.

V

The Dietary Significance of Mental Disorders

ONLY occasionally does the physician or nutritionist have to plan special dietary care for those who have some serious mental illness. On the other hand, the number of homes in which a mental disturbance plays a role in creating feeding and nutritional problems is considerably greater than one would imagine.

Among certain occupations—artists for instance—the number of high-strung and unstable individuals is myriad. High public officials develop personality and other changes which sometimes make them feeding problems. It is necessary, therefore, for anyone who wishes to comprehend the psychology of feeding people to know a good deal about the food reactions of those who are mentally unsound. From those who are seriously unsound or seriously maladjusted we can learn the basic nature of the mental processes, advise as to the possibility of treatment, and gain a greater comprehension of those lesser intellectual, emotional, and personality changes, which are mild representations of severe mental illness.

The everyday citizen fails to realize how great are differences among individuals. In some phases of mental life, these differences are sufficiently important so that their exaggeration might take the form of insanity.

Let us give an illustration: in the mental disease known as manic-depressive psychosis, two of the major symptoms of the manic state are extreme overtalkativeness and restlessness, so that the patient is almost constantly talking, shifting from one

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subject to another; in a typical case, he might very well be extremely active physically. Too, his ideas flow very quickly. With this disorder come certain problems of feeding.

There are normal individuals whose exaggerated emotions are similar to those of the sufferer from manic-depressive psychosis and who in turn manifest, to a much milder degree, the same symptoms. The feeding problem of such an individual is not as great as that of the typically mentally disordered manic-depressive person, yet he offers in his own way and to a lesser degree the same problem.

Similar parallels obtain in other mental disorders.

INTELLECTUAL DEFICIENCY

The most common mental disorder is feeblemindedness, which very fortunately exists in degrees, so that those who suffer from only mild mental deficiency are well able to take their places in society and can often keep out of trouble to the extent that they marry, have children, and are self-supporting. Eating problems among the feebleminded differ with the different degrees of mental deficiency.

Those people, who are merely stupid and who technically are called mental defectives merely because they do not pass an intelligence test at a high level, show only those varying attitudes toward food which we would find in normal people. They respond, excessively perhaps, to food fads and the mistakes of early habit training. It is more difficult, of course, to change bad food habits in such people because they do not learn easily.

As one descends the scale of intelligence, one finds that food abnormalities become more pronounced. Along with the inability to dress and wash himself the idiot, the lowest form of mental deficiency, cannot feed himself. These poor human beings are almost like animals because they learn little, can do nothing for themselves or for others, and have to be trained to

carry out their bodily functions. But like household pets, they also can be trained to eat.

The eating procedures of idiots follow closely those of the household dog, and their very abnormalities provide insight for us in the matter of why normal people have their food fads. Idiots can be fed the same food every day. If they find the things that taste pleasant to them on their plates, they will ingest them. Tricky methods of food preparation have no place, for it makes little difference whether the food which is placed before such beings is thrown into a pot and boiled together or served raw. Niceties in service or in food preparation are completely lost on these people; in fact, the enjoyment of delicate flavoring and of dainty food service increases with an increase in intelligence until we find the gourmet, usually a very brilliant person with a highly discriminative palate and markedly reactive to poorly prepared food. In fact, the mental reaction which is produced in the gourmet is sometimes so profound that food which would be palatable for the everyday citizen almost produces nausea in an individual whose palate is overacute.

Another feature in the mental defective which is of interest to those who wish to evaluate diet is the fact that as one progresses down the scale one finds that the less intelligence a person has, the less likely he is to be critical about the quantity of his food. Mental defectives have a tendency to gorge themselves; it may be that they have little else to occupy their minds but sensual matters, and eating and sleeping are the two most important matters to occupy their attention. It is very interesting to observe what quantities of food mentally defective individuals put into themselves. It has been of some interest to students of mental deficiency to note this tendency toward engorgement, and to some it has seemed to be an indication of endocrine-gland deficiency, which, in turn, can be blamed for the feeblemindedness.

One of the authors once made a study of the swaying motions characteristic of a certain type of idiot. These patients sit swaying back and forth day in and day out, their bodies moving like pendulums. It seems to be a form of recreation for these people who are too stupid to engage in ordinary sports or directed running games. The study resulted in finding that the rhythm, or rather the speed of swaying back and forth, increased as mealtime approached, an indication that the body tensions are very close to the surface in these very primitive forms of human beings.

The lowest grade of mental defectives, because of their lack of critical ability, demonstrate pica or bizarre eating habits in the most dramatic and simplest form. When they are hungry they will eat dirt or anything which is lying near them. They can be fed paper or other non-nutritious but edible substances, which they will masticate and swallow with evidence of delight. Naturally, since they are not educable, the idea of food being good or bad for them from a nutritional or hygienic standpoint never enters their heads.

It might almost be said that a lack of discrimination toward food is symptomatic of mental deficiency, but this lack must be fairly complete, in contradistinction to the lack of faultfinding about food which may be characteristic of the highly adjusted normal individual who has no food fads and apparently eats everything nutritious without comment.

In the normal person, there usually is a great deal of criticism. Dirty food is not eaten; food which is obviously badly prepared or which smells bad is rejected, first because the critical sense is still present and second because intellectually the normal but apparently uncritical person knows what is good for him and what is not within the limits of his background, training, and interests.

This judgment does not exist in the feebleminded. Dirt, bad odor, and differences in preparation mean nothing, and before

institutions for mental defectives were as well organized as they now are, epidemics of food-borne disease were not at all uncommon, due to the patients' inferior ability to judge what they should or should not eat.

Administrators of institutions for mental defectives find that their patients are most contented when they are well fed—first of all because they have a feeling of well-being which comes from a full stomach, and second, because even in the stupidest some sense of comfort comes from the attention that is given them when food is served to them. It is not uncommon to see in a colony of low-grade defectives a great chattering and excitement when the bowls of food come to the table, very much like one might see in a cage of monkeys. Food, even among those who are not well endowed intellectually, will always be a point of interest and pleasure.

DIETARY ATTITUDES OF THE INSANE

Just as we gain from the knowledge of the eating habits of the feebleminded due to the fact that they are uncritical and that their eating is primitive in nature, we can also gain a comparable amount of knowledge from the study of those who might be called insane (psychotic). Insanity, unfortunately, is a legal term which is only used here to indicate that these persons are suffering from an acquired mental disease, that they were not ailing at birth although they may have had the potentiality of their mental diseases with them at that time. The psychotics (which is the better term, for it is a medical expression) suffer from a multiplicity of disorders.

They may have disorders of mood, as in the case of the manic-depressive psychosis mentioned above. In the manic phase, they are overtalkative, flighty, happy, and elated; then they have depressed attacks where the emotional situation is completely reversed and they are downhearted, move slowly, cannot get their ideas in mind quickly, and react as we all do when

we have some problem which makes us feel "down in the mouth."

As the mood changes in these mentally sick individuals, we find the same problems with regard to eating that we find as a result of emotional changes in the normal individual only the picture is exaggerated. It is for this reason that they deserve our attention.

When the normal person is elated and very happy, he may be too engrossed with his happiness to bother about eating, and in the exaggerated form the same problem exists for the manic patient. He, too, feels good; in fact, he feels too good for his own safety. He is apt to do impulsive things and strike people and express himself in motion which is sometimes undirected and sometimes purposely directed to no good end. As he moves about demonstrating his great prowess and his happiness at being able to do things, he is utilizing energy at a great rate, and unfortunately the doctor and nurse have difficulty in making such a patient settle down to eat; psychiatrists used to lose many patients who died from starvation and exhaustion.

Modern psychiatric techniques have made it possible to calm these patients down even before the attack, from which most patients recover, and the patient then eats normally.

During these periods of quietude, the quietness of the patient's conduct may be only relative, but the physician takes the opportunity to feed him high-caloric foods and thus to supply him with the fuel to burn up as his extremely happy emotion again begins to rule his activities.

A normal person who allows happiness to guide his conduct to any great extent will likewise, in the course of his cheerfulness, use a great deal of energy. In the normal person a continuing period of excessive happiness is not common. Those who are subject to spells of great cheerfulness may have the manic-depressive type of constitution and are usually likely to

have spells of depression. Only a few of the most lucky are able to go through life with a reasonable degree of cheerfulness and a minimum of depression. Those people who are cheerful, benign, generally happy, and well dispositioned often exhibit a tendency toward obesity or are overweight. Cheerfulness is accompanied, as a rule, by some activity and demonstration of energy which burns up the body's fuel and in turn causes an ingestion of food to make more energy available.

In the same amiable, happy, energetic fashion that this cheerful type of person carries on his activities, he also does his eating. He eats with gusto, with enthusiasm, and he does the hostess's heart good when he comes to the table. Not only is he a good companion and a cheerful contributor to the table talk, but he also does justice to the food which is put before him. He is too alert and too happy to be critical, and quantity rather than quality may often be characteristic of his food intake. Sometimes indeed, when there is too much of the manic in the guest's makeup, he is a little bit revolting because of the way he smacks his lips and puts down the tasty food.

His counterpart perhaps is found in the well-fed, benign clergyman of the Middle Ages whose presence in every household was highly desired and who brought with him good advice, comfort, and good cheer wherever he visited. With his benignity and cheerfulness, he brought with him contentment and a good appetite.

We must distinguish such an individual from the gross eater of the type of Henry VIII, who packed down food for the pure sensuous enjoyment thereof. While it is true that the cheerful type of individual enjoys his food, it is his general cheerfulness and his energetic approach to matters of discussion and of activity which lead him to be hungry and to have such a vital attitude toward eating.

Opposite behavior is found in the depressed individual. Manic-depressive psychosis, being an intermittent disorder

and one which occurs in attacks, may bring a patient to the psychiatrist in either a manic attack as described above or in an attack of depression. These attacks may last from a few days to a few months. Fortunately, we see more individuals with manic attacks than with the depressive attacks, but the latter do occur also, and in some poor unfortunates they are chronic and sometimes very severe.

As with the individual who has just received bad news, the depressive person finds it very difficult to consider the problems of others because his own problems are so important. He cannot get his thoughts together. It is hard for him to decide what to do and then do it, and it is hard for him to eat. Often the very depressed cases have to be fed and in some patients whose disease is very serious not enough activity can be stirred up so that they will even co-operate with spoon feeding. Many may have feelings of guilt and wish to die, and suicidal attempts are not at all uncommon. Because of this wish to die, there is no wish to eat in order to live, and it may be necessary to use *gavage* or tube feeding in such cases.

During the downcast mood which occurs in the lives of most of us, the emotional reaction is more or less the same as it is in the depressed manic-depressive case; we are so preoccupied with our unhappiness that we do not wish to eat.

If this unhappiness or the cause of it is of long standing, the depressed person may become distinctly malnourished before the depression passes. In the absence of certain vitamins and energy-supplying foods, and in the presence of starvation toxins, the depression itself is aggravated. The advice that we hear so often, and which is so difficult to induce the patient to carry out—"if you would eat something, you would feel better"—is excellent. The sooner the depressed person can be induced to overcome the worst of his feelings and to take nourishment, the greater is the probability of resurgence of sufficient energy to face the problem and to deal with it in such a way that the

depression will soon disappear. Indigestion in acute depression is uncommon, although physiologic studies have shown that mental depression reduces stomach motility and the digestive process.

In order to overcome the refusal of food in such cases, a great deal of psychological and culinary ingenuity is required. A knowledge of the depressed person's favorite articles of food is of great value, and here it is necessary to distinguish between the favorite food of those who are preparing it (which they think the depressed person would enjoy) and the depressed person's real favorites. As a general run, however, most men brought up in the same neighborhood like the same foods. A knowledge of racial and cultural feeding practices also will aid in inducing the depressed person to eat. We could not expect one who has been brought up in an environment of chicken paprika in his Hungarian home to enjoy Philadelphia scrapple, and presenting the latter to him will not induce him to eat.

Careful preparation of the food so that it is not overcooked, with the sauces not too pungent (or with no sauces where none are desired) is likewise desirable in trying to induce the depressed person to feed himself.

A classic example of overcoming depression through adequate feeding is the observation which has been made among defeated prize fighters. After prize fighters have been in training, especially to take off weight, they have certain nutritional deficiences, particularly in the matter of building foods, and occasionally, before we had our better knowledge of vitamins, there were vitamin deficiencies. While this aided them in getting down to the correct weight, it also had a somewhat depressing effect on them. Defeat added to such a condition often depressed the fighter so seriously that he approximated a mental case.

Like other athletes, after the bout or match, fighters break training, and one defeated prize fighter in particular showed a

marked change in attitude as soon as he had eaten one or two large and juicy sirloin steaks. The depression which he had manifested at being defeated disappeared, and within the hour he and his manager were busily engaged in making plans for the next bout, or for a return bout with the victor of his recent fight.

PARANOID DISORDERS

There is a group of mental disorders known as the paranoid type. These are characterized by various fantastic ideas about the patient's body, his companions, his family, and the society about him. Often the characteristic paranoid case has hallucinations: he hears voices plotting against him or talking about him, often calling him bad names, certainly discussing him, but the physical origin of these voices is nowhere to be seen. Sometimes such persons taste particular flavors in their food and develop the delusion that the food has been poisoned. In a normal person, however, such changes in flavor may seem of no importance or may just indicate slight spoilage or contamination in the icebox.

Because of these fantastic ideas the patient may be very suspicious of those who wish to feed him. If he feels he is being persecuted, he identifies the poisoning of his food with those who, he believes, falsely, are trying to do him harm some other way. Such cases manifest all sorts of eccentric behavior about the food that is brought to them. Because the milk is not put in its usual place by the milkman some morning, perhaps because the milkman is new or finds something else in the place where the milk bottles are usually put, the paranoid person immediately develops the idea that the milk has been tampered with and will refuse to drink it. Such ideas are particularly important when the paranoid patient has ideas that his wife is unfaithful to him and wishes to get him out of the way for purposes of another marriage, or because she wants his money, or

for a multiplicity of other "causes" which have no basis in fact. Almost anything that this wife, who is the object of his hatred, puts before him in the way of food is unpleasant and to his mind may very well have been tampered with.

There is another group of paranoid individuals who are litigious and have a tendency to go to court over the slightest provocation; these persons, feeling that they are being unjustly treated by being cheated or being ruined by somebody, often project their ideas against the food which is served them.

In such cases, the finding of a foreign body in the foods, which may occasion disgust in the ordinary individual, prompts such a patient as this into suing the person who supplied the food.

A case brought to the attention of the Recorder's Court Clinic involved a man who sued a caterer for a large industrial company for a large sum of money. This man was suffering from a severe mental disease of one of the paranoid varieties. He had previously been engaged in lawsuits to get his imaginary "rights" of various kinds, and it appears that one day he took sick while at work. In accordance with a not unnatural impulse he began to review the various things he had eaten and came to the conclusion that he had drunk a certain soft drink which was responsible for his ailment. He was not sick for any great length of time, and his sickness was not so severe that he had any medical attention. By the time that he was seen in the clinic he had already developed a complete mental picture of what happened at the time he was "poisoned." He stated that by some accident a dead mouse got into the bottle of soft drink. When asked if he saw the mouse, he replied that he saw part of it. When asked what part, he stated that he could only see the claws. It was obvious that no such animal could have been injected into the small neck of this bottle, and upon going back to his colleagues for a confirmation of this story, the clinic worker found that the patient had made no such com-

plaint at the time of drinking his soft drink. However, he had found some white substance in his mouth sometime during the day, which may have been pieces of his teeth or some foreign object which he had picked up in his hand, but which had no resemblance to a mouse. The whole idea of poisoning was a symptom of his mental disease.

This illustrative case may seem to be farfetched, but similar reactions to foodstuffs are found in normal individuals. Often a person will not go to certain restaurants because it is his belief that the food is not good. He may never have eaten at the place, and the whole idea may have been created in his imagination. Perhaps on some occasion he may have heard someone discuss the restaurant. More often than not he has been at that place when a certain article of food was served which he particularly disliked, but he tended to generalize and he may even be suspicious.

Reactions very similar, but much less severe, occur in the minds of certain abnormally suspicious persons. Chronic patients sometimes claim that dietitians have discriminated against them because portions served to them were smaller than those served to others. This complaint has been made on occasions when diets are weighed, and from the record it could be shown that the portions were identical.

Food which has been contaminated once, perhaps only by accident, is often thought to be contaminated for all time. An overly sensitive woman who finds a hair in her soup may never go back to that eating place, reasoning from this one occasion that the food served there is never wholesome.

PERSONS WITH FEELINGS OF GUILT

A number of mental diseases are characterized by feelings of guilt on the part of the patients who suffer from these diseases. One of these is a melancholy condition which comes with the menopause. Others are attacks of depression which occur in

individuals who are not basically manic-depressive in type. There are still others found in milder mental conditions. Because such patients have feelings of guilt, they manifest these feelings in certain outward ways.

Feelings of guilt usually produce a general attitude of unworthiness which, when carried to extreme, make the patient feel as though he should live no longer; because he thinks he should die, it is difficult to feed him. Sometimes, if he does not have too great a desire to die, he will only reject food partially because it is "too good for somebody as bad" as he is. In other instances the patient rejects food altogether.

Other patients enter hospitals with the belief that they cannot eat certain foods. These beliefs may be based on real physiological food allergies, or they may be based upon some deep-seated psychological mechanism. They may associate certain foods with unhappy acts in the past, or they may associate them with persons to whom they ascribe their mental condition. Such individuals often need complete re-education in eating, and such re-education pays (as it does in the normal), for often recovery from the rest of the mental disorder follows the recovery from the food fad.

Another interesting group of mental patients is the sufferers from organic disease. Persons who have some physical ailment which is responsible for their mental symptoms come to the hospital often with markedly dulled taste. They do not particularly care about food; it does not taste good to them, and their appetites are diminished because of their physical ailment. In some cases where they are not generally toxic, as in the disease known as paresis, their food intake may be tremendous. Even though the sense of taste is dulled, they are inclined to eat for the pure physical enjoyment of sensing the nutritive material passing down through their gullets and feeling their stomachs become replete.

THE AGED

Hospitals are full of old people, but far more of the elderly and nonadjustable remain at home with their children. Often they are merely querulous and difficult to get along with. At other times they are suspicious and exhibit a number of symptoms like the paranoid person described above. The most common symptom in old persons, however, is a memory defect. With the weakening of their memory there appears in some cases a desire to tell tall stories to fill in the gaps and, in other cases, the tendency to dwell on the past where the patient's grasp of what happened to him and what he saw is still secure in his memory.

These features of the personalities of old persons cannot be ignored in considering dietary problems. The old person, if suspicious, must be handled in the same way as the suspicious paranoid individual. Food placed before him must be of impeccable quality and, in addition, must not present any element of novelty. To the old person, as a rule, those foods which were eaten during his childhood and the way that he ate them then are the only things that he now recognizes as being right and proper.

The elderly are unable to stand very much change. The transfer from one hospital to another of a senile dementia case may result in the patient's death. The shock of changing environments and having to adjust to a new situation, no matter how simplified it may be, is too much for the weakened mind to stand.

Changes of food have like effects. Families with whom old people dwell, even those who are quite normal, find themselves in the midst of a great deal of dissension when the ingenious young bride tries to give the elderly father-in-law something that he has never eaten before. He condemns it heartily, and the young cook's feelings are hurt. Had she even had a slight

idea of the fact that the old are intolerant of new things, she could have spared herself embarrassment, or, at least, if she felt that she had to serve the novel dish, she could have remembered that no matter how good it might be, the newness of it would have brought criticism upon her head from the old man.

It is important in feeding old people to have some knowledge of the old person's background. If he came from a farm where his early years were spent in a rural community, or in a small town, the meals put before him if we expect him to eat should be of the type that he had when he was a young person. On the other hand, if he has been a man of the world, it might be well to avoid serving him with foods which are too plain, for he has probably acquired a taste and interest in well-seasoned foods long before his faculties had started to deteriorate.

The onset of real senility brings with it a decrease in intellectual attainment, much like that of the intellectually retarded person. If the memory is deficient, and the emotions more liable to explode for minor causes, associates realize that the individual is a problem and must be dealt with as such.

Second childhood is no misnomer. The slowing-up of the intellect due to the effects of old age upon the brain follows a downhill course which in reverse repeats the intellectual growth of the child. If the course is rapid enough and if the patient lives to be old enough, he may even withdraw into a real infantile condition and resemble a child of two or three. Since this age behavior parallels that of the mental defective (the idiot has an intelligence equivalent only to that of a two- or three-year-old child), we can expect senile attitudes toward food to be that of the mental defective. Lack of critical ability and tremendous appetite are often found in these old people. On the other hand, physical ailment and a general slackness of gastrointestinal functions may serve to neutralize the vast appetite which would come with this childishness, so that quan-

tities eaten will be normal, even though the critical ability to judge food as to its healthfulness will be entirely lost.

In general, the rules for handling the aged are simple:

1. They should be allowed to follow their own whims and should not be urged to eat more than they want.

2. If they need more food for security or because they are becoming childish, such food should be supplied, for the hungry senile person is very difficult to deal with.

3. Lastly, the senile person should be fed rations with which he was familiar when he was much younger, and if he has deteriorated sufficiently far they should be those foods which he ate as a child.

VI

Food and Nutrition as They Affect the Home

One of the few times of the day when the whole family gets together is at the dinner table. An observer in any domestic-relations clinic would be surprised at the number of conflicts which either express themselves at the dinner table or which come about because of it.

When two people decide to live together as man and wife, there is a need for love and a need for a certain number of identical interests. Usually love is the only factor considered. Oftentimes, among the more ignorant in the population, even love is not given much thought, and people marry because of propinquity or because of the fact that they are getting old and feel they ought to marry before it is too late.

Naturally any basis for conflict which exists between these two people will be accentuated as the marriage goes on, and food is frequently a basis for conflict. The conflict in cultural patterns of two people who may come from different regions of the United States or even different parts of the world cannot be overestimated. Those mental reactions to food which come from the earlier emotional patterns of the husband or the wife will present problems much like those of training the child in the development of normal food attitudes during childhood and adolescence, or even like the food problems of the insane.

Most people who have conflicts based in part on food are prone to find other explanations for their incompatibility when discussing their problems with the family-relations coun-

selor. Often a husband has a good reason for rejecting his wife, because of her inadequacy either emotionally, domestically, or sexually, but expresses himself first about the food. On the other hand, the wife who rejects her husband because of his lack of faithfulness, his economic inadequacy, or the fact that he makes sexual demands on her which are incompatible with her bringing up and sexual adjustment, often reports that no matter how hard she tries to give him things that he likes to eat, he does not eat these things.

The reason for this falling back on food is not hard to find. Food is a symbol for the adequacy of the marital relationship. When that relationship becomes inadequate the complaining partner in the marriage finds that poor food is the most socially acceptable complaint. He cannot very well go out in public or go to his friends and discuss the sexual life of the family. It is even rather bad taste to discuss his wife's inability to do good housework, but the complaint about her cooking is sometimes considered humorous and is almost always acceptable.

The wife, hearing the husband's complaint about the cooking, reacts more strongly to it than she might to complaints about the sex life because it is tradition that the wife, if she is a housekeeper, should be able to cook properly.

REJECTION MECHANISMS

There is a multiplicity of causes for friction in marriage. Probably no two marriages break up for the same reason, although behind most of them there lies sexual incompatibility. Sexual incompatibility need not break up a marriage if there are other interests which the husband and wife can share. Particularly if there are children, the sex conflict can be resolved when the husband or wife can enter into daily activities which give other satisfactions to the personality.

Without such possibilities of relieving the conditions which wear the edge of marriage raw for both partners, sexual incom-

patibility becomes more and more a source of tenseness. If the husband comes home at night and finds a wife who no longer is attractive to him even though she may be physically attractive in an abstract way, and who, because of her dislike of him and her rejection of him makes him wish to stay away from home, tenseness is bound to arise. If in this situation he sits down to a meal, probably no matter what is served, he will find it unpalatable. Such food rejection is purely emotional, and has little to do with the wife's cooking.

It may be said, however, if the wife is an extremely good cook, and the husband is a gourmet and enjoys his food, the food which is set before him may very well serve as a source of satisfaction to negate the sexual conflict.

Sexual conflicts between husband and wife make themselves known through food conflicts; yet the adaptable wife, the one who gives sexual and other comfort to her husband, can very well overcome these dietetic difficulties. In this country marriage between two people who are born in different parts of the world and whose ancestors had entirely different eating habits are very frequent. Conflict over the various interests in food occurs either when there is tension due to other causes or when the dominance of either the man or woman is such that an attempt to modify his or her taste brings about a reaction.

It is necessary to recognize that in every home there is a dominance of either one or the other partner. The extremely well-adjusted home does not reveal this dominance overtly. Such an expression as, "She twists him around her little finger, but he doesn't know it," is a classic example of the utilization of practical psychological methods to obtain dominance. In general, however, a man does not like to have it known, even to himself, that he is being ordered about and managed by his wife, so that the titular picture of the head of the family must always be carried out.

In the food situation, the wise clinician who is dealing with psychological problems of nutrition is inclined to advise that the wife cater to the demands of her husband. She can often do so completely, particularly if she has made an unconscious adjustment to her husband's domination.

If, on the other hand, for various reasons, she has what is known as a "masculine protest"—that is, a protest against male dominance—and does not like to be managed, this conflict of wills is of extreme importance in the later adjustment of the couple, and she may find it difficult to cater to the food demands of her husband.

There are various ways of solving food conflicts if they are cultural alone. If, of course, they are deeply seated and the wife rejects the husband for reasons other than the way he has been brought up and his interests and habits, psychiatric attention is necessary. But for the cultural conflict, where the man dominates the woman and it is necessary for the woman and man to bring about food adjustments, the situation is somewhat easier.

The steps to aid in such an adjustment are:

1. In giving a balanced diet, food should be served which both members of the family like. If the balance has not been complete, the necessary supplementary articles of diet should be those of the husband's choosing unless he prefers the attention-getting process of "martyrdom."

2. The introduction of new articles of food which the wife likes and which will add variety on the table, particularly in furnishing supplementary needs to the diet, can be made gradually. If the husband has any pride in the wife's cooking or in the way the household is being run, he will take a taste of a new dish in order that visitors, if there are any, will not see him reject it. Therefore, when there are other persons present, it is wise to introduce a new food which the company is likely to enjoy.

3. There is no reason why the wife cannot learn to like those things which her husband likes, nor why she cannot demand that he adopt some of the things that she considers important either nutritionally or from the standpoint of taste. Care must be taken in such a situation to keep the difference in taste from becoming an issue. If the husband learns that his wife wants him to eat certain things because she feels it necessary for him, and there is some insistence brought to bear upon him, he may be rather resistant to the new dish. On the other hand, the wife with a masculine protest finds it difficult because of her protest, rather than of any food fad, to eat things to which she is not accustomed but which her husband demands.

4. One of the most valuable allies in handling a husband from the standpoint of feeding is the husband's mother. Only too often in the family relationship the mother-in-law is the source of friction. Because she resents the fact that the beloved daughter has been taken away by "this man" or more often that her son has been taken out of her hands, she will attempt to show that she is still the dominating person. Such a mother should have nothing to do with the handling of the food because it is then merely an additional source of friction. But if the well-balanced mother comes as a guest or if the mother and daughter-in-law find themselves to be extremely well adjusted to one another, as fortunately happens often, the mother-in-law's advice as to the food fads, interests, and idiosyncrasies of the whole family can be made a most useful tool in expanding the wife's culinary repertory.

5. Many of the rules used for training children can be used to readapt the husband whose difficulty lies only in bad food habits. New foods can be introduced as side dishes or in small portions. The delight that the wife takes in his expression of enjoyment of old or new foods is an additional incentive that can be used.

6. But, lastly, it is well to remember that overstressing the

food fads is unwise and that the wife as a rule, particularly if she is responsible for food preparation, would do well to adjust to the husband's attitudes provided he can be given a balanced diet.

A knowledge of nutrition and its background will help the housewife over culinary hurdles. If the husband will not drink milk, she can learn to give him calcium in other ways. It is unwise for a sense of tension or pressure ever to arise over food.

TABLE TALK

It is interesting to the student of nutrition to consider the psychological value of the social situation at the mealtime table. More frequently than at any other time in the average household, there is a grouping together of all the members of the family. During the meal the child has a chance to learn something about his father's interests and attitudes, and he has a great opportunity to observe what goes on emotionally between the father and the mother.

It has long been a matter of common knowledge (backed up by the findings of Cannon and others) that cheerfulness during eating speeds the digestive process. It may be inferred that this quickening of the digestive process also means that the food is taken without bringing about any symptoms of gastric upset or discomfort.

When tenseness occurs between husband and wife it needs to be ironed out. Minor difficulties can be smoothed over before mealtime. When there are children present, more serious difficulty should be concealed, even though the tenseness resulting therefrom undoubtedly makes itself known to the children. Since in many homes the children have little opportunity of observing the parents together except at mealtimes, what they experience in this situation is a key to their later adjustment. If there is tenseness at the table because of friction between the husband and wife and snappy remarks are

passed back and forth, this tension is observed by the child and undoubtedly affects the digestive process. Even if the actual physiology of digestion is not disturbed, unfavorable reactions will come about on the part of the child, for he will vie with the rejected father or mother for the affection of the other parent.

Normally the family at the dinner table is at its greatest ease. Usually there is more time for leisure and the family as a rule is not anxious to get away from the table before the food has been consumed; it might be noted also that the family is on exhibition. The child who is a good child becomes aware of the fact that his conduct is acceptable to the parents by the calmness that prevails at the dinner table. When he misbehaves or when one of the other children misbehaves, the sense of tension is apparent even to the youngest.

Bossard has given a very interesting summary of some of the socio-psychological features in the family interaction of table talk.

1. In the first place, the table talk of the family very clearly defines the individual's role. If there are members of the family who do not get along with one another, this fact is usually recognized by seating them apart from one another. Those who have distinct fondness for one another often express that fondness in coming to the table. The child who says, "I want to sit with Daddy," shows to some extent a rejection of the mother and also affection for the father. On the other hand, the child who wants his food cut and demands attention, and for that reason desires to sit near a parent or an older brother or sister, might be found to have emotional dependence.

2. It is interesting to notice that the family gets a chance to try out various capacities and interests on the other members. One child who knows a great deal about railroads and trains may dominate the conversation with this particular interest, while in another instance a girl who is engaged may either

talk too much about her fiancé, or may be quiet and blush when his name is mentioned.

3. During the meal a great opportunity occurs for the correction and adjustment of unfavorable traits. The child who talks too much, is too aggressive, or has a tendency toward second-rate humor may be told to be quiet and give somebody else a chance. On the other hand, children who have very few inhibitions are distinctly prone to express their opinions about other members of the family. This frankness is very likely due to the fact that during the process of eating the family is so interested in the taking in of food, in its palatability and its novelty, if there is any, that minor breaches of personal relationships are accepted without too much criticism.

4. The family meal is an opportunity to learn. Some children learn new expressions from things that parents say to each other. Parents find out how much children have been able to acquire in the way of knowledge during the day, and the children may make demands upon the parents' learning, so that the parents have to do some studying themselves to answer questions. All of these reactions are sources of satisfaction. The parent overcomes any feelings that he might have of discouragement or inadequacy during his daily activity by the reaction which the child shows to his presence at the dinner table.

5. On the other hand, for digestive reasons, if for no other, squabbling at the dinner table must be frowned upon. The dinner table is not a place where corrections should be carried out, and misdeeds of the child during the day should be allowed to rest in peace until a more appropriate time can be found for investigation. In fact, if the matter has not been dealt with before the meal, the misunderstanding might well be dropped.

6. A matter which deserves consideration is discipline before a meal. Certainly if it can be avoided, no correction should be undertaken immediately before a meal. A crying, disturbed,

or upset child not only loses his own appetite, but he disturbs the adults at the table. The father and mother who may be tired deserve some rest from the children. The habitual development of the breakfast or dinner table as a peaceful place of mutual admiration and entertainment is one which is not too difficult to bring about and one which pays highly in psychological dividends.

THE PSYCHOLOGICAL BACKGROUND OF FOOD PREPARATION

Much too little thought has been given to the psychology involved in the preparation and serving of food. Just as a husband may reject his wife and express his rejection in terms of complaints about the way the food is prepared, the reverse condition is often found.

If the wife is incompetent and cannot put decent and adequate food on the table, the husband reacts to the unpleasant taste and discomfort and wants nothing more to do with his wife for the time being. Though any reasonable man can be expected to forgive an occasional poorly prepared meal, if there are sources of tension even the occasional poorly prepared meal is of importance, and the husband seizes upon it as another evidence of his wife's incompatibility.

On the other hand, if all meals come to the table in such a way that the husband cannot eat them, or if they are unpleasant in taste and appearance, the chronic feeling of unpleasantness in the home life begins to overshadow those areas in which the husband and wife get along well.

This fact has been generally disregarded. Perhaps it has never been recognized before, but certainly it is more in evidence today than it ever has been before, in some degree perhaps because domestic cooking skill may be declining. The young girl getting married in the nineteenth century was expected either to know all about cooking or to be able to direct

a servant properly according to her station in life. Even girls coming from wealthy families, except perhaps in the nobility of the European countries, were expected to know a great deal about the preparation of foods. There was little stress upon nutritional principles, but there were certain stereotyped meals brought to the table, which, upon analysis, supplied most of the food elements necessary to graceful and healthful living.

How to get these foodstuffs ready and how to put them on the table was taught to the girl by her mother. The mother, working in the kitchen, often gave little tasks to the child, and as she grew older the tasks were more and more complicated until it was not surprising for a thirteen- or fourteen-year-old girl to bake her own birthday cake and bring it proudly to the table. This mother-to-daughter pattern has largely been lost, partly because many more meals are now eaten in restaurants and partly because families have a tendency to scatter farther than they used to. Sons and their wives seldom live with either parents, whereas not many generations ago it was not at all surprising to add a wing to a home to take care of newlyweds.

It is not even customary today to demand in a newly wedded woman any capacity to cook, and fiancés generally take the attitude that even though the wife cannot cook very well they will be able to get along somehow. They are willing to go out for more meals, and it seems to the husband who knows nothing about food preparation that all that one has to do in order to get a meal on the table is to open some cans.

It is true that courses in cooking are given in schools, but these are given so early in life and they are so incomplete and oftentimes are given in such haste that they leave very little impression on the girl's mind. Instead she has to get her information where she can. Many girls merely develop the habit of reading women's magazines. Women in the lower classes,

who probably learned a great deal about cooking from their parents, are not so apt to get new ideas from magazines, particularly if they have a foreign cultural background or come from those areas in the United States where education is not very well developed.

But even among those who would be expected to know more about the preparation of food and its nutritional value, the general run of knowledge is strangely incomplete. A survey of women made by the General Foods Company reveals an appalling lack of knowledge of the elements which are required for the balanced diet. Most women, although they have heard of vitamins, in the year of 1942 did not know in what foods these vitamins were found or what their value might be.

A source of family friction has been the cost of food. Even when prices were not rising and incomes were high in proportion to food prices, it was necessary for the housewife to buy food at a minimum cost in order to permit purchase of other necessities from the family budget. Many women who accordingly learn to "shop around" so as to save pennies here and there, however, fail to recognize family likes and dislikes so that food not eaten can be replaced by a more palatable food, and they do not know about substituting one food for another of like nutritional value.

It would seem to be almost as important for the girl who is about to be married to know as much as possible about food —purchase, preparation and service—and about the psychology of those who are going to eat the food she will serve as it would be for her to know any of the other functions of marriage.

To the scientist, lack of sex instruction and the lack of instruction about food preparation seem to be appalling omissions in an otherwise properly developing educational system in this country.

As has been suggested the two are in great degree interact-

ing. Sexual maladjustment often causes reactions unfavorable to nutrition. Poor food preparation or tension-caused food situations break down on occasion an adequate sexual adjustment. The family where both sex and nutrition are maladjusted is in serious trouble.

Evidence of sex and culinary education might some day be a condition for issuing a marriage license just as health examinations in certain states are required now.

What are the possibilities for the young girl to learn what she should about cooking? Or for the older woman, since many housewives need to revise their own ideas about food preparation?

Some magazines have shown considerable keenness in supplying menus, including the recipes for each important dish, for a month at a time. It would seem to me that the interested housewife who has such a systematic menu planner before her month by month would be more inclined to subscribe to the magazine; yet, as a subscription getter, meal planning has not been stressed. Much of the material, however, is poorly directed. On one page of a woman's magazine may be a recipe for a meat loaf which has in it most of the nutritional elements and has an excellent flavor. But the advertiser fails to mention what other dishes should go with this meat loaf in order to produce the proper dietary results. On the opposite page may be another main dish of an entirely different nature.

The various isolated magazine articles and material of that nature scarcely help the housewife to develop a comprehensive point of view about her whole nutritional program. A few articles appear, for instance, on dishes which are especially interesting to men. These may set up conflicts in the home if undiscriminatingly accepted.

Much needs to be done in the way of investigation of likes and dislikes of various ages of the two sexes with regard to each of the items that are necessary for a balanced diet. We

have, fortunately, a few studies on what particular foods are disliked by the two sexes in terms of basic substance, that is, whether asparagus is liked or disliked; but we have none or hopelessly few of the sort discussing whether creamed asparagus, for example, is liked more than asparagus *en beurre*.

Many cook books, too, seem to be weak in the whole field of meal planning. There is nothing in most cook books to suggest the particular article of food the wife might do well to prepare. She can go to her cook book to see how what she has can be prepared. But recipes for single dishes do not take into account other nutriments that might be necessary to balance the diet.

The preparation of food in many homes can be largely standardized. There are certain articles of diet which are fed day in and day out, perhaps in variety enough to be satisfying, but the housewife without a good general knowledge of cooking and of meal planning in general adult nutrition is seriously handicapped.

Perhaps the best hope, and one which seems to be largely unrecognized by nutritionists and by housewives in general, is found in daily newspapers. Here, day in and day out, a daily menu (properly balanced by one skilled in meal planning from the nutritional standpoint) is given which includes the foods most readily available on the market, and often those which have the lowest cost in terms of the nutrition which they give. The whole meal is outlined, every item that should go into it is specifically mentioned, its preparation described. Some papers give additional value by printing a brief outline of the meals for the week so that staples and groceries which will keep satisfactorily can be bought all at one time, thus saving the housewife extra work. This practice of providing a daily menu which is properly balanced, easy to prepare, and tasteful, has not been widespread as yet.

There is one last feature that must be taken into considera-

tion in the psychology of the housewife who prepares food, namely her intellectual capacity. Recipes and menus are of little use unless presented in such a way that the woman with average intelligence can comprehend them and follow directions properly.

WHAT THE HOUSEWIFE CAN DO

There are a few simple ideas that the housewife can bear in mind in order to produce the maximum of good will in her household.

First, she should know or learn enough about nutrition so that she can provide a balanced diet for her family. As will be shown later in this volume, much irritability and temperamental behavior may be due to an improperly balanced diet. She should see that every nutrient element necessary for health is included in her meals over a reasonably short period of time even though she may have to consider the food likes and dislikes of members of the family.

Second, she should provide an adequate quantity of food. This may be limited by financial considerations, but inexpensive and palatable dishes can always be used if care and attention are paid to their selection and preparation.

Third, she should remember that palatability of the food served is extremely important. The housewife soon learns how much seasoning to use, and after a period of trying different dishes, she should have a repertoire as large as possible which the family likes and which will give an opportunity for a balanced and filling diet. During the experimental period, she must expect some novelties to be rejected, but rejections should not discourage her because the greater her repertoire, the greater the opportunity to find dishes which everyone likes. Care should be used in the preparation of a dish, so that it tastes equally good and substantially the same

each time it is served. Chance fluctuations in flavor, overcooking, or burning may cause a temporary or even permanent rejection of the dish by the entire family. The careful use of clocks and thermometers and other measuring instruments is advantageous.

The housewife's attitude is extremely important here. She should direct her state of mind so that the approval and acclaim of her family will stimulate her to greater efforts. Even if there is not much vocal approval, the fact that everything is eaten with evident pleasure should give her the satisfaction in her creations that the artist gets from admiration of his *objet d'art*.

Fourth, wise purchasing, not necessarily penny-pinching, prevents tension over rising food costs or limited budgets. Often foods prepared with fillers and substitutes or cheaper meat cuts may be made as palatable as the more expensive cuts served in fashionable restaurants.

Fifth, the wise housewife should remember that our people have been trained to choices in food. Basically, a man can eat the same pabulum day after day, but he prefers to have something different quite frequently. Favorite dishes of the whole family, particularly if they are inexpensive and provide good balance, can be repeated more often than others. Too frequent repetition dulls the edge of desire. The experimental dish which is well received might be repeated reasonably soon so that the family will not forget that they liked it when it was first served. Any rejected dish may well be dropped permanently from the repertoire. The greater the list of accepted recipes, the greater variability is permitted in menu planning.

Sixth, much has already been said about catering to individual tastes. It is well that this be done as much as possible, particularly if there are only one or two rejected foods which have equally nutritious substitutes. By and large, however,

well-planned and well-cooked meals will tend to iron out variations in a large family. In a small one, more attention should be given to individual likes and dislikes.

Seventh, the housewife should consider herself a little bit, particularly in the matter of time- and effort-saving. If possible, she should have her kitchen so well organized that it requires a minimum of trotting about, reaching, and lifting. Combination dishes containing several different foods, such as casseroles, save attention, watching, and dishwashing. The use of pressure cookers, steam wells, and other large heating units to prepare the whole meal also saves energy, time, and fuel. Often a little extra thought will permit the planning of a well-rounded meal with a minimum of effort. For instance, when there are two dishes to be mixed on an electric mixer, the materials can be put in two bowls, the second to go under the mixer as soon as the first one is finished, thus saving complete duplication of the process. Perhaps the mixing bowls can also be used as casseroles.

Most of these suggestions are in the realm of domestic science or home engineering, rather than psychology, but the psychological gain lies in the decreasing of strain on the housewife so that she can enjoy her own meal when mealtime comes.

VII

Mental-Hygiene Technique Applied to the Feeding of Large Groups

People behave differently when they eat by themselves or in the bosom of their family and when they are eating with large groups. The mere fact that there are many people eating in one place does not mean that the psychological reactions of all people tend to take on a similar appearance. Some people will react belligerently to crowds in order to gain attention. Others will tend to withdraw and comply with the customs. Some places where large groups are fed tend to encourage this individual reaction. The commercial restaurant, for instance, offers a large number of choices, thus encouraging food fads and individual differences.

The problem of feeding groups of people in restaurants presents many psychological facets. One of them bears on the sex of the majority of customers. Women, for instance, can be easily overwhelmed by large portions, while men complain and change their eating place because of "tea-room portions."

The individual differences so important to iron out in the early training of children may not be terribly important if there are large groups of customers who are being fed à la carte meals, but the table d'hôte menu must cater to whims, to variations in daily desires, to home training, and to regional food patterns if it is to give satisfaction. From this standpoint not only is quantity important but also the type of food. It is assumed that men are greater eaters than women, in general correctly because of their greater size and the greater activity of their occupations. Restaurants can vary portion size; qual-

itative differences must still be considered. No one can explain why women prefer salads rather than the heavy meals which appeal to men. Boys and girls are fed alike in their own homes, yet the tea room must have buns, biscuits, salads, often made up of cream cheese and fruit, whereas the restaurant which caters to men must have generous portions of meat.

When large numbers of employees or persons coming from the same part of the country are being given their meals at one place, it is economical to feed the customary articles of diet even though they may be transplanted. Certain areas of the country stress hominy grits and neglect eggs for breakfast, and it takes some time for transplanted workers to stop complaints about the lack of the former and accept the latter as a reasonable substitute. The psychology of group feeding varies according to the type of program rather than the number of people and their ages.

COMMUNITY FEEDING

The need to feed large groups of people at one table and under one roof was promoted by war conditions in England in 1940 and several years thereafter. Though larger numbers of people have been fed in restaurants for a single meal than were fed in England in any of the so-called British Restaurants, the problems were different.

The purpose of the British Restaurants was to supply an extra nonrationed meal for those people who were probably not getting enough to eat under the ration scheme. There were secondary advantages: for those who came to the British Restaurant, at least one meal would be adequately balanced from the physiological standpoint. Community feeding also removed the differential between those people who were working in factories and those who had to stay home, such as the children and mothers, for the factory workers were already being fed supplementary rations at canteens whereas the

mothers and children had to get along as best they could on what they bought at the stores.

From a psychological standpoint, the British Restaurant has proved to have advantages that were not suspected. All those who go to these community feeding centers get acquainted with their neighbors. They compare their troubles and their problems, and the solution for one family may easily provide an answer to the problems of another. Since all are served the same quantities and the same foods, there is no rivalry, no feeling of superiority or inferiority on the part of various families. A greater good will is derived, for the citizen feels that he is getting something for nothing in the sense that he does not have to give up any of his valued ration allowance for this particular meal, and he does get food which, under ordinary circumstances, would be limited if he depended only upon his personal ration book. While no careful psychological studies of British Restaurants have been made, a great deal of information seems to creep out between the lines in the various reports about the British people. For instance, an increasing number of people are using them even though in a given period of time the food ration is not cut. The implication is that this type of eating is found to be pleasant and to have advantages.

The providing of the noonday lunch without making the housewife go to the trouble of preparing it has great advantages in helping her to organize her day's work. Many housewives can work in factories because their children are given lunch in a central place. Others can do very much more for their children with less strain because they have only to see that the children get to the restaurant. The average government expert tends to think in terms of carbohydrates and calories and is prone to ignore the element of fatigue and monotony in having to prepare the noonday meal each day for just the children.

It is a surmise but probably a true one that the mass feeding of persons in one place, as has been done in England under these conditions, has served an important purpose in building morale. It assures people in a practical way, in a way that carries with it the symbolism of security—food—that the government is looking after their well-being. It provides a method of cheerful personal contacts and neighborliness which can be gained in no other way, and it relieves some of the more fatiguing stresses and strains in the woman's life.

THE SCHOOL LUNCH

The counterpart of this type of feeding for children alone is seen in this country in the school lunch. Practically no school system, even those in relatively small communities, fails to provide a lunchroom in schools where the children are drawn from districts too large for them to return home easily in a short lunch period.

The need for a warm lunch at noon is apparently more traditional than real, but it is often the chief talking point for a school-lunch plan. Because the child is eating warm food and perhaps warm drink, it is assumed that he is warmed by the food. Undoubtedly the feeling of warmth is pleasant, but it is interesting to see in children a preference for cold ice cream, in the middle of winter. It is the calories in the food that provide the warmth, and these are the same in a cold dish as in a warm one made up of the same ingredients. The real physiological value of the school lunch, planned by properly trained persons, is that at least once a day the child is getting a perfectly balanced meal. Where his nutrition-ignorant mother consistently may be leaving out certain elements that he requires, his equally consistent balanced school lunch will provide at least a third of his minimum daily requirements of that element.

But the school lunch itself poses certain psychological prob-

lems. It is not possible to force a well-balanced lunch down the child's throat and have him accept it. In many instances the child sneaks away from the school and goes to some neighboring shop where he gets candy and cake and other foodstuffs which probably keep him in energy for the day but do not provide the balance that the able nutritionist offers in the school. This practice has been overcome by not allowing the children to leave the school at lunch time. Such a prohibition has a detrimental effect in that it keeps many children from going home to lunch when they really should.

In most instances children will prefer to eat at school in the lunchroom rather than to go home since most of the children do not go home. Lunch time offers a recess period, and they want to make the best of it.

Food choice is difficult to control. The idea of "good" food has little significance to children. The less money they need to pay for food the more money they have for other things they want. Hence, they are inclined to buy the cheapest item on the menu, only enough to satisfy their minimum hunger, in order to save a few pennies. In order to overcome the problem of choice, some schools have attempted to provide only one basic dish. The difficulty with this is that the child with food fads or with food idiosyncrasies will reject that particular dish and not have enough to eat for the day.

It is impossible, it appears, to train all children to clean their plates each day, and it is equally impossible to vary quantities in order to take care of all differences in appetite. It is strange, however, how alert the manager of school lunches can become in diagnosing favorite dishes. While it seems that no general rules can be made about the foods preferred by most children, yet in any neighborhood there are consistent preferences. First of all, children appear not to want those foods which are undistinguishable, that is, which are so mixed up that the elements put into them are not readily diagnosed. The child

wants to know what he is eating. Possibly the only consistent exceptions to this are meat loaf and chile con carne. The child assumes that meat loaf is the same as hamburger, and therefore, is made out of ground beef, the other elements of the loaf, such as bread crumbs, are ignored. In chile, bits of beef and other solid objects can be identified in the gravy.

Although adults know hash contains meat and potatoes, it arouses suspicions in children, which the school lunch caterer cannot overcome. In general, school experts will say that children eat those things at school that they eat at home. It is interesting to note, parenthetically, that there is no problem today in getting children to drink milk because the drinking of milk in the home, even of the poorest, has now become so consistent among children.

One of the interesting psychological problems involved in school lunches is not presented by the children but rather by the teachers. Teachers can wreck a good program of child feeding by thoughtless remarks in the lunchroom. They can commit all of the errors that were mentioned in Chapter II, with more unfortunate results because of the large number of children within their hearing. The teacher who carries her own food fads to the lunchroom with her and who has her own ideas about how to eat, can offer a very serious problem. At one lunchroom it was noted that spinach was rejected for several months by some of the children although it had been a favorite food for a long period prior to that time. In tracing the matter down, someone remembered that a very domineering teacher had made the remark, "What is the idea of feeding those children spinach? It's awful stuff."

On the other hand, some schools have from time to time reported a falling off of attendance in the lunchroom because teachers would come and nag the children, trying to force them to eat things that they did not want.

Unwelcome novelty of diet must be carefully guarded

against. The school lunch does not appear to be the place to introduce new foods or new combinations, no matter how valuable nutritionally.

In general then, we might recapitulate the school lunch problem as follows:

1. A general program must be laid out and followed consistently, which will not introduce new foods or unfamiliar combinations.

2. The foods which are eaten in the neighborhood should form the basis of the school's lunch plan, which, of course, will need to be modified for expense, availability of food, and other secondary, nonpsychological factors.

3. Some opportunity for supervised rest and recreation might be considered. Children will rush through their meals unnecessarily. However short the lunch period may be, they still try to get time to play, and a lengthening of the period supplies more play rather than more eating time. The system used in the lunchroom, the cafeteria, or other eating place, should be so planned that part of the lunch hour can be used for rest and recreation.

4. Certain foods which children crave and may not get enough of at home, such as sweets and desserts, should be provided but should be limited in proportion to the amount of nutritious food that the child selects for himself. In other words, it should be provided as a sort of bonus. Nevertheless, it is well if every child has some of this less desirable food, for it removes discontent and tends to draw the child away from candy carts, ice-cream vendors, and neighborhood candy stores. Sweets give to the child the feeling of comfort, freedom, and pleasure that he can get in no other way from his noon meal, and when supplied with the meal, they can be used to enhance the balance.

5. The teachers who supervise the food should either not meddle with the children's choices or should be trained in

the concepts enunciated in Chapter II. Their own food concepts should be kept as far as possible out of comments, criticisms, and suggestions regarding the children's eating.

INDUSTRIAL FEEDING

Probably the most important mass-feeding project that confronts government administrators, nutritionists, physicians, or other persons interested in proper feeding of our people is that of providing proper food for the workman. In the early days of this country the man working in the factory located in a small community was able to get home for lunch. Usually the food provided for him was bountiful and came from his own farm. With the growth of industrial communities, where homes were far from the place of work and where often there was no place for a garden, food habits had to change.

The first change made it customary for workmen to carry their lunches. The food contained in these lunches was put together without much thought as to nutrients. These lunches were chiefly bread with a certain amount of meat made into sandwiches. Often they consisted only of vast wedges of cake, and the amount of food included in them was not enough to fortify the worker against hunger for the rest of the working day.

Another psychological difficulty associated with the box lunch was the fact that the man could and did take little pieces out of it during the morning and have nothing left to eat during his lunch period.

Disputes occur between husband and wife when the contents of the lunch box are not what the workman thinks he wants. There is a great deal of stereotypy about box-lunch menus, even though they are not as susceptible to social factors as the lunch eaten at the open table. The approval or disapproval of one's companions is not as marked in the case of the lunch brought from home as the lunch selected in the

cafeteria. Nevertheless, such comments as "Don't you ever get anything else but peanut butter in your sandwiches?" or "What on earth is that?" pointing to a salad cup are heard in factories, so that the enterprising and intelligent worker or the unintelligent critical worker may have a much more profound effect upon changing the food habits of his fellow employees than one ordinarily suspects.

The introduction of the thermos bottle into the lunch brought from home made possible supplements to the sandwich diet. More recently, the general use of the wax-paper cup has made it possible to bring a certain amount of greenery in the form of salads or cold vegetables, which further serves to balance the diet from a physiological standpoint. As these things have been advanced, the psychology of the lunch box has changed somewhat.

First of all, it has become customary for a man to bring a fairly large lunch box, containing a thermos bottle. Thus he can always be given a drink containing milk and will not find himself chaffed by other workers in the plant because he has a large lunch parcel. The lunch box with a thermos in the cover can contain an adequate meal for the worker. The tendency on the part of the food administrator is to get away from the lunch box, not because it cannot provide an adequate meal, but because balance is, as a rule, lacking. It is too dependent on the knowledge or ignorance of the housewife who prepares it.

It would be possible to provide proper food for all in lunch boxes only if daily menus were handed out, followed religiously by persons who provided the lunch boxes, or if adequate training were made available for that person so that she could function efficiently—for instance, as in the Westinghouse project described in Chapter X, in which instructions were given to the workers' wives by monthly menus.

A cultural fixation about the lunch box is the idea that to

be economical it must be filled with leftovers. Hence its contents are customarily sandwiches filled with whatever can be saved from previous meals. Unfortunately, some so-called nutritionists suggest such unappealing though nutritious sandwich fillings as chopped cucumber, olive and cream cheese, lettuce, or cole slaw. These rather damp mixtures result in unpalatable and soggy bread and the workman rejects them. The psychological side of feeding the workman is only too often ignored by housewives and food editors of newspapers.

The noonday box lunch may be insufficiently varied. When the wife finds some things that the husband wants, she will provide those things.

It is much harder to educate at third hand than it is at first hand, but that is the problem in factory education of the housewife who prepares the cold lunch. First the husband must be educated or at least must take home the educational material to the housewife. Most husbands are not interested in housekeeping problems and are usually pretty well satisfied with any routine lunch that the wives have developed for their lunch boxes, so that the indirect educational approach is unpromising. It is for this reason that it is far more important to try to educate the housewife to provide a good main meal at home and for the plant to provide a good meal to take care of the probable lapses in the housewife's knowledge.

Fads and fashions may be important in lunch-box feeding. For instance, girls in certain factories in Detroit once teased each other if they carried "unladylike" lunch boxes. Women workers developed the custom of carrying their meals in paper bags, which fairly effectively precluded any supplementary liquid or green salad. Some men also dislike carrying anything that they are not compelled to. Many prefer to have a lunch they can slip into the pocket rather than a lunch box, and this preference cuts down the possibility of balancing their noon meal.

The lunches of those on night shifts seems to follow fairly consistently the same fixed policy. Even though workers may be eating their breakfast at five o'clock in the afternoon, they will eat the same kind of box lunch at midnight that they would at noon if they were on a day shift. Meals eaten in lunchrooms, however, tend to differ as men eat lunch or dinner at 9:00 P. M., at midnight, or at some early morning hour.

It is unfortunate that today industrial feeding is not given the attention from management and from the medical officers of some of our big plants that it should be given. Numerous studies have proved the importance of the proper feeding of the workman for at least his one meal at the plant. The balanced diet is said to cut down absenteeism and job changes and even to reduce domestic problems. The probabilities are that if good food is provided for at least one meal a day, it will have significant and important effects.

There are several reasons for an indifferent attitude on the part of plant executives toward the feeding problem. The first one is that most managers have learned that to supervise any aspect of the worker's life is interpreted as paternalism. While this feeling is not found in factories where the employer has been sincerely interested in his employees over a long period of time, it is present in most factories where health or working conditions of the employee have been considered important only since the turn of the century, perhaps only since the turn of the decade.

In addition, the supervision of feeding for a large number of workmen is a large problem for many employers. To all the other problems of procuring and supplying equipment, hiring personnel, promotions, it adds a new group of problems with which management is not too familiar: the purchase of food, the purchase of equipment to prepare it, and the hiring of catering personnel.

Even after doing all these tasks, management finds too

often that the psychological problems of feeding the worker have not been considered. These primarily are getting the worker to adopt the right attitude to the management-supplied food, and second, getting the worker to select the food that is best for him. In the latter, any paternalistic factor becomes overwhelmingly conspicuous. Hence the management's problem in getting the worker to eat good meals calls for the cooperation of the food psychologist, who has no place yet in any plant, and the enlightened dietitian or nutritionist, of whom there are too few in industry.

Where it is necessary that management supply food because the workers are too far away from public restaurants or because time does not permit their leaving the plant to eat, manufacturers have found that it is of value to employ caterers or, at least, contractors. Caterers and contractors may have as their only object the making of money with a minimum of complaints. The contractor has no obligation to the plant to see that the worker is properly fed from a physiological standpoint or even that he gets palatable food, for contractors too often feel that workers *must* eat what they are given since they cannot get food elsewhere. In our experience the contractor tends to start off fairly well and to cut corners as rapidly as he dares until he gets to a place where complaints start to come in rather more frequently than they should. Then he raises the standards a little bit to cut down the number of complaints, yet to get by with a minimum of expense.

Contracting to supply food relieves the employer of responsibility and places it in the hands of a completely irresponsible person who cannot often be checked by protests against his incompetence. Food protests and complaints cannot be important unless they cause the plant management to want to change. It is possible through various practices to vary the food so that no large number of complaints comes from a single place at any one time, particularly if the plant is large.

In many plants where the contractor supplies only certain articles of diet, it is possible to direct the worker's selection to those articles which he probably would need to supplement his lunch box. Milk, chocolate milk, and a well-balanced soup are often presented in such a way that the workman takes them with the lunch box, rather than a "soft drink." Combination lunches are sometimes presented which are nutritiously well balanced. However, these are the exceptions.

The unions have been of some help and probably will be of much more help in the future in seeing that food supplied through contractors is adequate. There have been strikes in the Detroit area brought about by the poor quality of the food supplied in some of the plants. Though such strikes hurt the war effort, it would seem that they were the only means the men in the plant had to get themselves nourished and do their part in war production.

There is no universal method of supplying good food to the worker. Only in those plants where there is considerable enlightenment is food supplied properly. As a matter of fact, there is as yet very little effort being made to see that adequate factory food is supplied in suitable form to nourish the worker properly.

The rejection of food in the plant may be very significant in analyzing employee-employer relations. It is reported that a government bureau once made a survey of a plant; found that the food service was excellent, that it was clean, and that the food was well balanced in so far as management could get the workers to eat the choices laid out before them, and that all in the plant had a model setup. Yet only a month later the same government bureau was called upon to make another survey because the union complained the food was so poor in the restaurant. Investigation showed no change in the food but a marked change in the employee-employer relationship. Because the employer had been dilatory in signing a contract,

the workmen rejected him and rejected the security that the food supplied by him offered. For the same reason that a little boy who has been punished or is not being given a "square deal" rejects his father and will not eat at the table, the employee-employer relationships influence attitudes toward the food which is made available for the workmen.

If his personnel problems are properly handled, the employer can supply a well-balanced diet which is palatable and which the workman accepts, and the workman gets a feeling of satisfaction with his employer. On the other hand, the employees will show their feelings emotionally to the employer by their attitude toward the food supplied. Only too often today the employer forgets that he is setting up a whole chain of adverse reactions by not supplying good food.

There are a few general rules that might be borne in mind in the setting up of an industrial feeding plan:

1. The employees do not want to have their time taken up with a lesson in nutrition. They want to eat what they like and believe that what they like will nourish them properly. They are not resistant, however, to educational procedures if they are not too obvious. A nutritional campaign is not usually considered objectionable although it will probably reach only 50 per cent of the employees in any plant.

2. Special rewards and inducements seem to be of the greatest value in balancing the worker's diet. The free extra salad that comes with the dish of meat and potatoes will encourage a certain number of workmen to eat that food. The gradual introduction of needed articles of diet into dishes which are already accepted without changing their flavor too much is a method which has been used.

Workmen, like women, eat "with their eyes." The majority of them want tremendous quantities, and this desire must not be forgotten. As a general rule, they are satisfied with the inexpensive farinaceous foods, such as potatoes, bread and

butter, rice, and macaroni, but they will want their meat too. It is necessary, also, to consider the fact that workmen in the United States feel they need much meat, often beyond the actual physiological requirement.

3. Another matter of significance in the planning of a nutritional program is that there is a distinct time element that must always be considered. The employee would rather have a poor lunch and time to rest and talk than have the best lunch available and have to spend his lunch hour waiting to get it. Hot-lunch wagons that provide meals throughout plants near where the workers have their jobs offer an important means of supplying the worker with a good meal because he wastes no time in line or in going to or coming from a restaurant.

If cafeterias are to be used, then it is better to use small cafeterias spread throughout the plant than to expect the workmen to spend much time going to and from a central eating place.

A comfortable place to sit down and rest should be available if the worker is to eat close to his job. This need is almost universally ignored in the planning of lunchrooms.

4. The problem of feeding women is different from that of feeding men. Quantities are different. Food preferences are different, and with women fashion is more important. Nevertheless, it is wise to take into consideration the fact that both men and women prefer to eat together if the lunch hour is long enough and if both sexes are employed in the same plant. Conversation at mealtime is a "sauce" that should not be forbidden, and segregating men from women should be attempted only as a last resort when the problem of selecting food pleasing to both sexes becomes complicated. If it is possible to buy double portions in the plant, women will order the single portion and men the double portion, and thus equalize the different quantity preferences. On the other hand,

where men are willing to consider food palatable without decorations, women have learned to want their salads and other accessories. This set of sex-linked differences adds to the plant's problems, but recognition of its existence will save a good deal of friction.

5. Some consideration can always be given to the personality types and the background of the men working in factories. Unfortunately, in the larger plants the population is so heterogeneous that one cannot supply any particular type of food for a majority. Nevertheless, it is possible to offer foods which are interesting to a large number of employees as a group. In a plant where there are many Polish employees, a Polish dish can be inserted on the menu once in a while. If necessary it can be modified to be highly nutritious, thus introducing physiological as well as psychological benefits.

There can be no question of the value that a psychologically sound dietetic plan can have in making the worker more productive by virtue of his increased contentment. We can only hope that both government and management will soon turn their attention to this phase of personnel adjustment.

VIII

The Special Psychology of the Patient on a Diet

A WELL-KNOWN psychiatrist once said that when Johnnie catches the measles he is not "Johnnie with the measles," but he is "measley Johnnie." In other words, his ailment becomes a part of his personality. He is more irritable, perhaps, and responds more poorly to directions because he is itching and feels ill.

The patient who has to be subjected to a diet likewise has his personality changed by that fact. The nature of the diet, the probable length of time during which he will have to live by it, and the attitude of those around him are important factors. More important, however, is his own personality.

Very few people are able to stand any limitation of their activities. They are, of course, more likely to control their wishes, desires and behavior if others around them have to control theirs at the same time. In the case of the ordinary dieter there is nō social sympathy to aid him in this adjustment. The man who has a weak desire to beat his wife does not do so because most men do not, and it requires little effort on his part to restrain himself.

If the same man is put on a diet, his inclination is to do as the other people around him do. Suppose he is to reduce and the quantity of foods which he is to eat are limited. It requires much conscious effort, and much desire to co-operate with the physician for one to refuse potatoes when everybody at the table with him is taking large ones. The tempting odor of these

comestibles comes to his nose and he sees plainly how they are being enjoyed—by others.

The layman would say the dieter needs will power. The psychologist, however, recognizes that will power is a relative weighing of inward feelings, responses of others, and the goals to be gained by carrying out the directed objective—in this case, the diet.

THE THRESHOLD CONCEPT

In psychology there is a neat and simple way of expressing this conscious and subconscious weighing of temptations and eventual goals. It involves a concept known as *the threshold.*

The criminal threshold is the resistance that the average person puts up toward committing crime. He does not wish to go to jail nor does he wish to have other people look down on him. His early habits and his companions, whether they be criminal or not, determine how much resistance he can maintain toward the temptation to commit an offense when it confronts him. If his companions have been bad, if he has been reared in a bad neighborhood, if he needs money badly, he may even go so far as to make his own opportunity.

In diet the same picture is present. The person who has long been habituated to scanty eating does not miss certain articles on his diet if they are dropped out, all other things being equal, but in the United States we are accustomed to quantity and variety. When the quantity and variety are pinched by virtue of the fact that we must do without because of our need for good health, the threshold is established in a subconscious weighing of the relative values of good health and longevity against the odors of food, habituation to the use of it at every meal, and the temptation to have the feeling of satiation. On the other hand, to raise the threshold, that is, to build up resistance toward breaking the diet, are marshaled the disapproval of the family who wish the dieter to be with

them for a long time, possibly the knowledge that a few more years may be necessary to build up a reserve to take care of the family in the event of a sudden death, and such wishes for the future as a desire to see the children go through college and to see what they make of themselves. These may counterbalance the temptation the desired article of diet exercises by virtue of its physical characteristics and our habituation toward it.

In making plans to put a person on a diet the physician frequently disregards the threshold principle. As he and his nutritionist see it, only one task remains to be done after the diagnosis has determined that a disease is present which needs diet therapy: to tell the patient what he can and what he cannot eat. The factors in his own personality are neglected. It was Frances Stern who first called attention to the fact that the patient's personality may be the most important feature in prescribing the diet. If the patient is handled in such a way that he does not want to co-operate from the very first, it would be futile to spend any time with him to tell him what he should eat and what he should not.

The idea of evaluating the temptation confronting the patient who is to be put on a diet and his personality may seem like raising an almost insurmountable wall for the therapist to climb over. It is not. Very fortunately, from a mental hygiene standpoint, Johnnie, whether he be "fat Johnnie," "diabetic Johnnie," or "constipated Johnnie" has within himself many traits common to all children, to all boys, and to all people no matter what their ages might be.

It is true that the disease symptoms that have brought him to the physician have affected his personality to some extent, and it is further true that the nature of the diet which is to be given to him must be considered in relation to his personality.

One consideration is the way in which Johnnie differs from other people by virtue of his fondness for his parents,

whether he has been rejected or accepted, and the goal which he and the parents wish to reach jointly.

The psychological point of view requires that a thorough study be made of the patient before a diet prescription is made. To reach the personality facets in diabetic Johnnie so that he will stay on his diet is as important as to know the right amount of insulin to prescribe for him. It has been for the purpose of keeping patients on the right road to health by knowing everything possible about them and using every technique possible to encourage and sustain them in their diets that food clinics such as the Frances Stern Clinic in Boston, St. Vincent's in New York, and the few others of a similar nature throughout the country have been established.

No longer is there justification for merely prescribing a diet while ignoring the psychological factors in a case. Instead, the diagnostic study made for the right psychodietetic approach should be as deep as the diagnostic study the physician must make to determine the correctly planned diet.

CHILDREN'S DIETS

Psychiatrists who have worked in children's clinics, who have treated children placed on a diet, are quite likely to say that if the physician who is prescribing for the physical ailment can avoid a diet, he should do so. If medication can replace diet therapy, it should be used. For example, an intelligent use of thyroid extract may reduce the child's obesity as adequately as a diet without leaving psychological residues.

Frolich made a study of diabetic children. While he realized that many of these children could be kept on their diet, he pointed out that there are others in whom family complications, hatred for the parents, and feelings of guilt make dieting almost impossible. He pointed out that it is quite possible with protamine zinc insulin to give a maintenance dose which will

keep the children, if not sugar-free, at a low blood-sugar level provided the child does not eat excessively. From a psychiatric standpoint, this picture is ideal. Physicians who have been dealing with a great number of diabetic children are prone to be very proud of the way that they have taught the children to regulate their own diet, to administer their own insulin, and to lead a relatively happy life.

Unfortunately, these same physicians missed many of the psychological facets that go with this efficiency in self-treatment. Most children who have to take insulin have a desire to conceal this fact from the other children. It is only occasionally in a child of very well-balanced personality that one finds a complete willingness to demonstrate to others his efficiency in medication.

It must not be forgotten that the child who has an ailment and needs to have it corrected by diet has not usually felt as distressed about that ailment as his adult counterpart. He assumes that all children are as sluggish as he was when on the verge of coma. If he is too fat, he lacks the ability to discriminate between the livelier activities of the thinner child as compared with his own.

The most important requirement in the psychological adjustment of the sick child to prescribed medical treatment or diet therapy lies in the careful avoidance of any procedure likely to give the child difference feelings; that is, feelings that he is not able to compete with or be compared to other children because he is different. (Children who have had difference feelings throughout their lives are likely to become problem children no matter how wholesome the home background may be. In addition, it is difficult to keep the home background wholesome because the parents have a tendency to overprotect children who are excessively large, small, or ill.)

The sick child is a child who needs extra care and attention,

and the greater the parents' preoccupation with the treatment of that child, the more they will want to guard against the unforeseen occurring.

One of the most difficult cases to handle from a psychological standpoint was one where the mother, on being told that the child had diabetes, was also warned that any shock or injury would result in the blood sugar rising and that if the blood sugar were to become abnormal, healing of an injury would be delayed and infection might well set in. Because of this warning, the mother became so overprotective that she gave the child no chance to get out with other children. He was not allowed to run and play. When he had to go any place in an automobile, the mother went along. His life was extremely dull; the mother raised objections to his taking a long ride to the public library to get books, and he was tutored at home. By the time that he was seventeen he was a most difficult boy to handle; he knew nothing about the reaction of other people his age to remarks he might make, and he fully expected that if he got into any trouble his mother would get him out quickly. Eventually he got into trouble by stealing a car, and the mother tried to intercede with the courts for him.

No one can deny that the mother herself must have had some abnormalities in her makeup to go to such lengths to over-protect. Yet, there is no doubt that the child's ailment when it was first brought to her attention and the warnings which she was given played a major part in almost destroying this boy's personality.

Fortunately, it was possible to place him beyond his mother's hands by sending him to a university, and in the course of four or five years he made a good adjustment. He needed only to get away from the mother for the physical disorder to become entirely secondary. Now, while he does not discuss his diet or treatment unless it is brought up, for he still has feelings of inferiority about them, nevertheless he can live with his

diabetes. If one did not know of it, he would pass as a physically normal individual.

The inferiority feelings engendered by a diet may also work unfavorably upon the personality of the child. Children who cannot eat at a party tend to shun situations where they are likely to be invited to other children's homes or to go where there are groups of children and eating might be involved. Such children cannot be said to lead normal lives although their other interests may be quite normal. It requires rare tact on the part of the physician and parents to make the child feel secure enough in the home and in his ability to do other things well that he can go to parties, either taking his own food with him or refusing all but a certain selected part of the party food. On the other hand, the parents can make up for the abnormal social situation by having frequent celebrations at home where food adjusted to the child's diet can be served in such a manner that the others who partake of it enjoy it and do not see anything abnormal about it.

One of the most difficult problems associated with children's diets is the fact that most of them are either permanent or semipermanent. Any disorder of childhood, whether it be obesity or one of the more severe ailments, is usually chronic and, unfortunately, is sometimes progressive. Every possibility of treatment should be exhausted with the object of taking the dieting child off his diet. Even when it is inadvisable to treat the obese child with medication, the physician should keep the idea in the back of his mind that the child should be gotten off his diet as quickly as possible. All of the environmental features about the dieting child should be designed to make his diet easier for him and socially acceptable. Nutritionists visiting homes of their dieting child patients have, if they have been at all sensitive to the family setup, noted frequently that others at the family table did nothing to ease the pressure on the dieting child. Where fats were limited for the youngster,

the brothers and sisters ostentatiously smeared their bread with butter. The thoughtful mother could very well have served bread and butter sandwiches to those who were not dieting rather than emphasize the difference between the dieting child and the others present.

Parents, whether they be overprotective or merely feel it to be their duty, have a tendency to nag the dieting child. It does not take long for a period of nagging to break down a good part of the family relationship and to cause in the child such resentment against the diet that it may be impossible to keep him on it. It is unreasonable to expect any human being, except one who sees at least small results in a short time or tremendous results in a longer time as a result of his diet, to be meticulous in carrying out the dietary instructions.

A child has little ability to look into the future. Future aims are not very good in building up his threshold against cheating on his diet. The child who is limited in his carbohydrates cannot visualize the number of carbohydrate calories that his body must burn in a small piece of candy. He does know that he craves it, that it is available, that other children have it, and it "seems so small that a little piece won't make any difference."

The mechanics of diet are also difficult to explain to the child, although food clinics are gradually building up a repertory so that the dieting child takes an interest in his diet, and gets satisfaction from it, both in praise and in the sense of well-being. He also learns that when he comes to the clinic with an improved state of health because of his diet he gets social acclaim which may far outweigh his discomfort.

In all diet planning with children, a simple psychological fact must be borne in mind, namely that there is a mechanism causing the child to want to get off the diet as soon as possible. Social pressure is present to make him react this way; temptations inherent in the food itself are present; and often the

disciplinary actions and the attitudes of the parents make the child react negatively.

THE DIETING ADULT

There is no boundary in psychology between childhood and adulthood as there is in voting. The child gradually blends into the man, but, unfortunately, in many instances the man still retains some of his infantile characteristics. This infantile tendency makes the adult dieter more difficult to contend with than the child. The habits which are carried along from childhood through adolescence, the emotional attachment to parents, and childish emotions require careful handling when a diet is prescribed.

For instance, if a man has been in the habit of going to the icebox as he did when he was a child, he is almost bound sooner or later to violate his dietary rules by cheating between meals. The physician or nutritionist, knowing this, might very well plan for a midafternoon snack even though the patient's diet is intended to reduce calory intake.

The emotional attachment to the parents comes out frequently when the patient publicly violates his dietary rules. The maladjusted young man who is accustomed to a great deal of attention from his mother, who is tied to her apron strings, finds that all he has to do when he has been told not to drink milk because he is sensitive to it is to drink that milk. He will be harangued, lectured, and hovered over by his mother until he either has an allergic attack or until he feigns one.

Conflicts with the parents, in the infantile adult as in the infant, bring gross dietary violations, particularly when the patient has developed feelings of guilt and death wishes which become so strong that he does not govern himself properly from the nutritional standpoint.

Some dietary violations come from sudden childish outbursts of rage. The tension of having to watch one's food, par-

ticularly when others are eating different articles of diet, is sufficient to bring on a great deal of conflict and nervous tension. If there are still infantile tendencies, slight stimuli will arouse a great deal of excitement at the dinner table. The patient's disposition is found not to be as good as it was before he was dieting, and this discomfort is ascribed to the different food he is eating.

Fortunately, it is not the food that is responsible for the change in disposition, but rather the feeling of privation and the lack of emotional maturity. Here again some adjustment on the part of the others with whom he lives can keep these outbursts from happening, at least at the table. They probably will break out in some other way if the individual is as emotionally infantile as this type of case sometimes is.

In prescribing a diet for an adult, particularly in a condition where there is likelihood of recovery or at least marked improvement, the physician who considers the psychological side of the problem finds himself seated on the horns of a dilemma. Should he prescribe a drastic diet which is to be carried out amid great difficulties but produces immediate results that might perhaps enable the patient to live a normal life in the very near future? Or should he prescribe as mild a diet as possible so that the patient will not be tempted to violate the dietary rules and will have a reasonably good feeling of well-being while he is dieting?

Which of these plans is adopted depends particularly on the patient's personality and on the nature of the disorder. If, for instance, the patient is being treated for obesity and he has an intense desire to reduce so that his woman friend will think more of him, the method may be as drastic as the physician wants. What the patient is after in this case is quick results. When he sees that he is getting them he is satisfied to suffer.

On the other hand, if the physician is dealing with a patient who has no great desire except his own well-being to stimulate

him to reduce, a mild and long-time process which might permit an occasional lapse (the patient should not be apprised of the allowance) is the treatment of choice. Sometimes people who go to a physician and wish to be dieted, particularly for obesity, know what they want themselves—at least they think they do. It takes only a few weeks' trial to see if the patient has sufficient motivation so that he or she will adhere to a strict diet. If this motivation is not present, the long-time process is more desirable.

In planning a diet for the adult, it is definitely necessary to avoid impossible situations. The physician or nutritionist who is responsible for the carrying out of a prescription should remember that an adult man has family obligations to carry out and has to be about his business daily in almost every instance, and that the woman has responsibilities also. For that reason, it is psychologically unwise, if it can be avoided, for the physician to prescribe a weighed diet for a diabetic man unless he eats at least two of his meals at home. A bachelor living in a hotel will find it very difficult unless a dietitian is available (which is the case in some of the larger hotels today) to have a weighed diet served him, and it would be unattractive and in poor taste for him to weigh food portions for himself in public before other dining-room guests. In order to avoid situations of this type, advanced clinics such as the Frances Stern Clinic, have, as far as possible, attempted to get away from the weighed diet.

There is no doubt that from the standpoint of the patient's physical health the weighed diet is much to be preferred over measured diets, but from the standpoint of psychological problems the weighed diet, except in one's own home, is almost an impossibility. It has been the experience of Frances Stern and her colleagues that even young children can be trained to measure food accurately by eye, and the child who is not subjected to unusual temptations will be found over a period of

time to have almost as accurately selected prescribed foods as one who uses a scale to see how much of a certain food he or she can have for a meal.

The measured diet has the psychological advantages of not attracting attention to the fact that the patient is on a diet, of sparing him the trouble of putting materials on scales and returning them to the plate, and lastly, of avoiding overstress of the fact that a diet is being followed.

One of the most difficult of the psychological attitudes that arise in the dieter, particularly one who is on a diet for a long period of time, comes from excessive preoccupation with the problems of diet. Some people become withdrawn because they are so busy thinking about whether certain things are good for them or not, and others compensate by ignoring the whole diet situation because they have developed almost a mental fatigue from their previous preoccupation with it.

Those conditions in which there is some pain or serious distress, as in the food allergy, are the easiest to handle from a psychodietetic standpoint. If the patient is faced with a very unbecoming and embarrassing rash from eating strawberries, we find almost universally that he or she will avoid strawberries. There are onion eaters who have intense discomfort after eating this favorite article and are soon weaned away when they learn from experience that it is onions that they cannot eat. After a period of time the allergic eater comes to forget the discomfort, rash, or other symptom which made him follow his dietary regime, and he will either unconsciously or deliberately eat some of the forbidden article of diet because he believes the diagnosis was wrong or that he has recovered. He soon learns by experience that he must refrain and for a longer period of time—perhaps for his lifetime—control himself.

The dieting patient is always hoping against hope that he can eat like everybody else, and the more the physician and the

dietitian realize that every effort should be made to make the diet as close as possible to normal eating behavior, the sooner the psychological concomitants of the ailment—the dispositional changes, irritation, and friction which the diet causes—will disappear. While it is true that in some cases the nature of the ailment demands that diets be bizarre and eccentric in order to keep the patient relatively healthy, nevertheless, in a number of instances, a thorough knowledge of what the patient eats normally may permit the prescription of a diet which is little different from his normal meal, and which not only helps to control his physical disorder, but may even provide a better-balanced combination.

Recently some experts on treatment of diabetes have tried, apparently with some degree of success, to give enough insulin so that an ordinary meal can be eaten—a great advance over the nauseous diets consisting largely of butter and cream which were prescribed in the days before insulin and which apparently did not stave off for any great length of time the ultimate doom of the diabetic patient. Just as the child does not want to have his differences emphasized, the adult has reasons for wanting a relatively normal diet.

Unfortunately in this world it is a common practice to make remarks and tease an individual about any dietary inconsistencies or eccentricities that he exhibits. In the case of some people who have exhibitionistic tendencies this does little harm and sometimes aids the individual in gaining a feeling of well-being. A well-known political figure in one of our large cities who was suffering from diabetes used to weigh his food ostentatiously, even when he was out at banquets; this action got a great deal of attention which, he thought, may have contributed to his being able to get large numbers of votes.

Contrariwise, an equally important civic official suffered from severe diabetes for many years without anyone knowing about it. His physician was sufficiently clever so that the man

could eat in restaurants and go about his business without anybody paying attention to what he was eating. He was restricted slightly in carbohydrates and since the recent period of emphasis on green vegetables had already come in he was able to fill up on these to his heart's content. It was his belief that, contrary to the idea held by the previous case, concealing his ailment had helped him with his career—that the ignorant knowing of his diabetes might feel that he was about to collapse on his feet and might interpret any period of acute illness he might have as his last one.

THE PSYCHOLOGICAL DIET

No discussion of diet would be complete without some consideration of diets which are administered for psychological purposes alone.

Patients who are suffering from vague physical complaints, probably of psychological origin, have a tendency to prescribe diets for themselves. In some cases, the symptoms which they describe are so similar to those of a real physical ailment that sincere and competent physicians are inclined to go along with their self-made diagnosis and endorse the diet or prescribe a new one.

It is always a good idea to be suspicious of the self-dieter. Even doctors who are not specialists in mental disorders will endorse this statement, for cases of women who are sensitive for social reasons and decide to diet come to the attention of almost all physicians with a broad practice. Sometimes these women really require an antiobesity diet but do not have a physician prescribe for them. More often, we find women who have the idea that they are gaining undue weight when it is a matter of one or two pounds and might be of benefit to them hygienically. Neither of these groups have any business to diet on their own initiative.

Gallup polls and other surveys of the nutritional knowledge of the American people reveal abysmal ignorance. The average person knows too little about the details of a diet prescription to select a safe diet for himself. Yet there is often a psychological need for such a diet and many physicians recognize this.

A characteristic case is one of a young woman, deeply attached to her father, but he, in turn, became more and more preoccupied with his business. His family had grown up; his wife was dead; and he was seldom home. Remaining at home was his twenty-one-year-old daughter who had far more affection for him than either he or she realized. As the father's preoccupation with his business increased, the girl began to have feelings of rejection and finally decided—falsely, but she believed it to be true—that the father no longer cared for her because she was getting fat. She began to diet and, although she was not overweight when she began, took off fifteen pounds. Soon her health was so impaired that the father had to give up some of his business enterprise and take her for an extensive trip to recover.

Another case of a self-prescribed diet, although slightly different, occurred in a woman who was extremely healthy, not significantly overweight although she might be considered plump, but being somewhat unstable found herself very sensitive to group opinions. After one or two of her woman friends had commented that she looked as if she had gained weight—as a matter of fact she had not—from a daily paper she cut out some articles about dieting and followed them, not according to the directions which would have been fairly safe, but, in order to get faster results, she modified them to suit her own wishes. Fortunately she was sufficiently sensitive to her own feelings of comfort and discomfort that it was only a short time before she came to a physician with complaints about backaches and other symptoms of vitamin deficiency. The

physician was able to dissuade her from the self-imposed diet and a prescription of vitamins quickly cleared up her physical complaints.

Both men and women often come to physicians for a diet prescription to satisfy certain psychological lacks which manifest themselves in bodily complaints. The physician nevertheless does well if he completely eliminates the possibility of incipient vitamin deficiency and food sensitivity before deciding that the cause is psychological.

THE DIET PRESCRIPTION

In dealing with the patient who needs to go on a diet, therefore, the following must be kept in mind:

1. A diet should not be prescribed if it is to satisfy a purely psychological need. The psychological causes of the condition or symptoms should be eradicated first if possible.

2. A diet should not be prescribed if safe treatment of some other sort can be utilized, particularly in children who would be sensitive and develop feelings of inferiority.

3. In conditions requiring only a transient use of diet therapy the physician should take account of the patient's personality in determining whether he should have drastic diet therapy or whether his treatment should approach a normal type of food behavior, bearing in mind, of course, the immediate physical demands of the body. If drastic treatment is needed because of the acuteness of the ailment, it would be unwise to consider too seriously the psychological picture which would demand lenient and long-time dieting.

4. In long-time diets every effort should be made to consider the psychological surroundings of the patient. Nothing should be prescribed which he would have difficulty in getting, and his diet should not be handled in such a way that his conduct will be conspicuous when he is out with other people. The psychologically minded physician will always emphasize that the pur-

pose of a special diet is to eradicate the need for that diet, and that object can be achieved only if the psychological as well as the physical factors are borne in mind.

SOME SUGGESTIONS FOR THE PATIENT'S FAMILY

1. The emotional tension with regard to diet should be eliminated as far as possible. The family should refrain from discussing it. The family meals should be arranged, if possible, so that the diet is not materially different from the meals served the rest of the family, and there should be no teasing, particularly among the children. A severe physical and mental effect can be produced by a casual remark of a brother or sister, "Don't you wish you could have a nice big helping of ice cream like this?"

2. The food should be made as palatable and desirable as possible. Ingenious combinations of permitted foods often do away with the patient's feeling that he is on a diet. It seems surprising how few nutritionists, knowing that the patient can have eggs, bread, and butter, ever think of giving him French toast for breakfast. Manuals for diet prescriptions emphasize the individual food elements but offer few recipes or menus useful in making the patient's meal pleasant.

3. When possible, the patient should have no responsibility toward his diet. Someone else should plan the food combinations and compute the food values, and he should be given what he can eat. It is useful to keep in mind, in restricted diets, that increased bulk takes away the psychological suggestion of insufficient food. Large batches of flavorful cabbage or spinach effectively negate the lack of a plateful of potatoes although the substitution is not entirely satisfactory.

4. Naturally, the patient's own tastes should be catered to to some extent, but too much catering may make him finicky; and, in the case of a child, will spoil him.

5. The patient, nevertheless, should know his own limita-

tions and be well educated to take care of himself if the person who is responsible for his diet is not around—for instance, when he eats out. The problem of the patient who does not live at home is increased by the difficulty of getting proper amounts of food properly prepared, but is decreased to some extent because he does not have an interested and intrusive family.

6. Diets should be arranged so that they have the effect of encouraging the patient, particularly the patient on a long or lifetime diet. An occasional rearrangement should be made, preferably of the kind which would suggest to him that his condition is improving. It may be necessary, when the patient is first put on a diet, to deprive him of a number of foods that would ordinarily be permitted so that they can be given to him later on. The improved emotional reaction of the patient who feels he is improving may actually cause improvement. For example, it has been shown that the blood sugar of the diabetic rises when he is under tension or worried. If the tension with regard to his own physical condition is diminished by encouragement, he should improve.

7. Some allowance should be made for cheating. If possible, plans should be made for parties, celebrations, and even an occasional snack. The patient on a lifetime diet has been known to commit suicide from the monotony of his life. The obese dieting child appreciates candy infinitely more than the ordinary child, and he probably appreciates sneaked or stolen sweets more than those doled out to him. If the prescription provides for an occasional slip, the family will not be so tense and disturbed over the situation, thus causing resistance or an increased difficulty in keeping the child on the diet. After all, in many cases of this sort, the slips that can be kept far enough apart are harmless.

IX

The Effect of Improper Diet on Behavior and Personality

THE OBJECT of a wholesome diet is to produce a healthy, attractive person who is able to accomplish those things in his life for which his natural gifts qualify him. This fact is too often forgotten in the continued discussions of food and its value in industry, in the home, and in disease prevention. Food is one of those factors that make for personal efficiency. Lack of food in large amounts, either of general or of special elements such as vitamins, has been abundantly demonstrated to have an effect upon the efficiency of the worker. Proper balance and proper quantities are necessary for an adequate mental life.

Unfortunately, the word "efficiency" in the minds of many seems to imply the ability to do work, but personal and mental efficiency goes beyond this idea. We are sure that those people who have a feeling of well-being enjoy life more than those who are in discomfort or feel ill, and a person's feeling of well-being is just as important to those who come in contact with him as it is to the one who fortunately has that feeling.

On the other hand, the mechanical efficiency and the ability to do work must not be left out of the feeding picture. A person can scarcely be called mentally efficient or even mentally adequate if he is unable, because of a feeling of lassitude or discomfort, to do his daily job. We see men who have been educated to a point where they can act as administrators or executives who do not reach the limit of their capacity because of vague feelings of ill health or lack of strength to do

their work as well as is necessary to impress their superiors of their ability. Their failures spell tragedy.

It would be easy to dramatize food in this connection in the same way that the patent-medicine testimonials display the marvels of the products they advertise. Frankly, it is not possible to cite many cases where a mere change in diet has meant the difference between commercial success and failure, although some have undoubtedly occurred.

It is not uncommon, on the other hand, for the dietitian to see numerous symptoms of mental disease or psychological discomfort disappear rather quickly under dramatic circumstances when the prescription of the psychiatrist or physician is followed. Perhaps this would happen more frequently if physicians and others who have to do with providing a properly balanced diet for patients or groups of people would analyze the food intake of unhappy people who have no organic disease.

Many of the layman's ideas about proper nutrition are carried out to a degree which is not justified by our experimental knowledge of nutrition at the present time. The relationship of diet to personality and other mental traits needs to be debunked rather than emphasized, but it would not be fair to the sufferer from a mild deficiency in his diet to urge that less credit be given to food and more to other therapeutic agents in adjusting the personality of the individual.

Nevertheless, it is well, as indicated in earlier chapters, to look into the personality of an individual who is unhappy, maladjusted, not working up to capacity, or easily fatigued, to see if emotional factors are not of greater importance than dietary. Thereafter, the wise diagnostician will assure himself that the elements physiologically required to make a healthy, happy individual are present in his diet. It is only reasonable to make sure that the physiological side of the maladjusted

person is taken care of before direct attention is given to trying to adjust him by means of dietary procedures.

Even in those cases where the mental maladjustment and the loss of mental efficiency can surely be laid to dietary deficiency, the balancing up of the diet will, over a period of time, correct the psychodietetic deficiency without the addition of therapeutic doses of vitamins or minerals. The eating of unprescribed vitamin pills to care for a diagnosed deficiency is wasteful.

Nevertheless, the nutritionally ill person, even if the symptoms are only psychological, definitely requires a nutritional prescription in which the deficient food elements are made available in therapeutically adequate quantities.

STARVATION AND OVEREATING

During the 1920's and 1930's many studies were made of children who had not been adequately fed for considerable periods of time. These studied included German children who had, during the war period of 1914–18, been subjected to distinct starvation in which all food elements, except possibly starches, were inadequate.

The results of intelligence tests of these children showed a surprising lack of difference between their test scores and those of children who had had what appeared to be an adequate diet during the time that the experimental group was starving.

Further studies were carried on by psychologists throughout the United States to see if children who were found to be undernourished when brought into medical clinics differed in intelligence from the general run of children brought to the same clinics. The differences were not great. The conclusion drawn from studies such as these was fairly simple: that intelligence as shown by the intelligence tests is a rather constant factor. It may be disturbed by unpleasant emotions such as

fear or by the mental tensions associated with a bad family situation, adoption, or institutionalization, but intelligence itself probably remains fixed throughout life, even though it may not be able to show itself in its best colors under certain conditions. With this idea in mind it is easy to see that it would take an immense amount of starvation, almost to the point of cachexia, to make a child's mind function so inadequately that he could not reveal his true basic intelligence.

Individual cases of hungry and starving children reveal a somewhat different picture. Children who are very hungry do not respond well to tests, rather as a result of distraction because of the hunger pangs or the appetite reactions than to a lack of the foodstuffs circulating in the system.

It must not be forgotten that the child who is on the verge of starvation but is not completely starved—that is, not so sick that it cannot go about its business—oftentimes becomes accustomed to the sensation of hunger. While the state is not pleasant, such a child is used to nothing else and functions as best it can while constantly undernourished. The pangs of hunger themselves disappear after a short time unless doses of food are given which are sufficiently great to keep the child continuously disturbed about lack of nutriment.

Studies made on children who are found to be malnourished at home and then later placed in a foster home, there to gain weight and to gain points in intelligence tests, are not sufficiently well controlled from a scientific standpoint to justify very much discussion. In such cases the love and affection that the child gets in the foster home are as likely to be beneficial and to cause a weight-gaining response as the actual food itself. There is no doubt that the child who is in a state of tension or lacks affection is a poor eater as a general rule. It is very difficult to separate children in this class from those whose parents are affectionate but economically unable to feed them. Both result in the same amount of objective malnutrition when the

child is examined before foster-home placement. The combination of the two circumstances is not uncommon, so that the whole picture is one that bears further study.

Observation of undernourished but not hungry children, the undernutrition being less than 10 per cent, leads one to believe that such children are a little bit more alert than their better fed confreres. Observers may very well be tendentious in their thinking and make this observation on the basis of the fact that the undernourished are also thinner, more wiry, and more able to move about quickly if they are not too underfed. Such behavior would give an observer an impression of alertness, quickness, and even heightened intelligence that controlled scientific findings might very well disprove.

There is an opposite type of child to consider in this respect —the counterpart of the fat boy in *Pickwick Papers*. Although tradition has it that fat people are necessarily mentally sluggish, this belief can only be considered a part truth. There are, of course, a large number of obese people who overeat and doze after their meals; perhaps, the flood of chemicals into the blood stream cuts off some of the oxygen necessary for cerebration. At the same time the activity of the gastrointestinal tracts demands a great deal of extra blood supply, causing a degree of anoxia elsewhere; and if we, as some competent physiologists do, believe one reason for the phenomenon of sleep is cerebral anemia we can see the wherefore of the drowsiness.

One does not have to go to such fictional characters as Rex Stout's Nero Wolfe to be impressed with the fact that overeating and underexercising do not necessarily cause *mental* sluggishness. William Howard Taft was a mountain of a man but had a very incisive and brilliant mind. Diamond Jim Brady was the archetype of the enormous fat man and could outeat all others; he nevertheless was a brilliant financial operator and salesman of railway equipment. Overeating in itself does not necessarily produce a diminution of mental alertness. At

certain times of the day it might. The worst psychologcial effect that overeating has comes from the secondary body changes. Efficiency is lowered by degenerative diseases that come from overindulgence of any kind and by the feelings of discomfort, of pain, and of incapacities that are symptomatic of the degenerative diseases.

THE NEURASTHENIC SYNDROME

Psychiatrists and psychologists have been preoccupied for a long time about the neurasthenic patient. She—for men are less frequently affected—is the kind of person who lies around complaining about vague aches and pains, who is never strong enough to get up and go about her business, and who always gives vague feelings of discomfort as an excuse for ineffectiveness. Neurasthenics are sensitive to light, to loud noises, and to unnecessary movements. They have vague pains in the abdomen. Their joints and limbs are heavy and ache. If they work a day, they complain for almost an equal number of hours about what the work has done to their physiques. They have an inclination to go to bed and stay there and to become chronic invalids. Thus in many instances, where families can afford it, we see the pathetic figure of the mother of the household—who should be enjoying herself with the children, seeing that the husband and children are properly cared for physically, and enjoying life in general—spending most of her time in bed, relishing the attention that she gets from her husband who believes that she is so physically ailing that she deserves much sympathy, and often reveling in the attention that she gets from the physician.

Such cases may be purely psychological in origin. The number of cases that have been proved to be due to dietary deficiencies is not yet so great that we can ascribe this picture to a lack of some foodstuffs in every instance.

It is certainly true that the psychiatrist sees cases of this sort that originate either in emotional conflict, due to problems in the home or in the love life which the patient is unable to face, or else originate in intense economic strain. With the removal of the causative complex or the feelings of inadequacy or strain, these symptoms disappear. In most instances there was no dietary help. Until the work of Norman Jolliffe and his colleagues brought to the attention of the medical profession the fact that the neurasthenic picture is often a symptom of dietary deficiencies, it did not seem to occur to the physician or psychiatrist who was treating such a woman or her male counterpart to look into the diet for a deficiency.

Today, the physician who has a neurasthenic patient would do well to study the diet which that patient has followed for some time in the past. Overingestion of alcohol, not necessarily to the point where the person might be considered an alcoholic or even a more than occasional drinker, has, in some cases brought to our attention, been sufficient evidence to raise suspicion of a food deficiency. Often a person who uses alcohol to any great extent finds no need for food, or at least refuses food which would normally be eaten.

The clubman whose stomach has been flooded with scotch and soda from an afternoon of "relaxing" finds that it is quite late in the evening before he can eat any kind of meal. If he is invited to dinner earlier, it is doubtful whether he will do more than eat what courtesy demands. Yet it is not only the clubman who has this experience. The worker who stops at the beer garden or tavern on his way home from work to have one beer, then another and another until he is quite satiated, comes home to an excellently prepared dinner with no appetite for it. It is not likely, though, that the late afternoon tea party of women is responsible for the neurasthenic syndrome in this way. After all, the tea and accompanying food are nutritious to

some extent. They may not be well balanced, but they do not have the properties of discouraging the presence of the B vitamin complex.

THE EFFECT OF DIETARY DEFICIENCY UPON THE DISPOSITION

The term "disposition" is not one which finds favor with all psychologists. It is vague, but in the authors' opinion it is useful. Certainly those people who are disagreeable and irritable, who are easily aroused to anger, may be said to have a "poor disposition," while those who are cheerful, friendly, mild, and relaxed are in the category of people having "good dispositions." Psychiatric science has not yet gotten so far in the correlation of food deficiencies with personality traits that we can say a particular vitamin or foodstuff is linked up with cheerfulness or with proneness to anger, but we are on safe ground when we consider that certain vitamin lacks do affect the disposition in a broad sense.

The conduct of people who lack vitamins lacks incisiveness. Scientists who have made studies of personalities of persons who have had insufficient vitamins of one sort or another list a number of psychological traits, none of which occur uniformly in every individual affected by the deficiency. Not all persons lacking thiamine lose their tempers easily, owing partly to the fact that many types of personalities are encompassed in any group of experimental subjects and partly to the fact that vitamin deficiency affects people differently.

In general, however, we might say that the chief characteristics of thiamine deficiency seem to be irritability and fearfulness. Little things seem to annoy the sufferer from his deficiency—things which ordinarily would not be noticed. Poor service at the table sometimes brings out an uproarious reaction, but a lack of such annoying circumstances does not bring

cheerfulness and the ability to relax gracefully. Sufferers from thiamine deficiency are restless, are easily disturbed by noises, and often complain of the personalities who surround them, people who under ordinary circumstances might have been their best friends.

It has been suggested that for nicotinic-acid deficiency cases a ready test can be applied: if one tells a good joke to the patient and he does not laugh, one may suspect in an individual who is known to have a deficient diet the early stages of pellagra or at least of nicotinic-acid deficiency. Marked deficiency of nicotinic acid produces mental symptoms acute to the stage of insanity. The patient may develop delusions and feel that he is being persecuted. He may even have auditory hallucinations and think that he is hearing voices which cannot be heard by those around him. We would not be going too far beyond the already demonstrated facts if we were to say that the unduly suspicious and the unduly bewildered person who is not suffering from some acute disease may well be suffering from a nicotinic-acid deficiency. It has already been noted that the lack of nicotinic acid may be a cause of the neurasthenic reaction, and, in addition to a combination of the symptoms, justify a diagnosis of neurasthenia.

Any of the following symptoms may be observed where vitamin-B_2 deficiency exists: fatigue, unrest, forgetfulness, and burning sensations or numbness. Lack of appetite in itself may be an important symptom.

But vitamin deficiencies alone do not cause psychological disturbances. A lack of almost any foodstuff may produce some symptoms of marked significance. The individual who suffers from too little protein in his diet may lose his feeling of well-being. He may suffer from vague aches and pains, and certainly he frequently lacks the energy to do things that he wants to do.

Fat deficiencies, on the other hand, are somewhat different

in their manifestations. Usually too little fat in the diet produces only a temporary effect in that the person who needs the fat becomes hungry, tense, and irritable.

Too little carbohydrate produces hypoglycemia, and unless the individual is carbohydrate-starved, or unless some unusual feature is brought into his diet (such as insulin without sufficient available sugar to utilize it) the human body has a tendency to bring out of the liver and the tissues their reserve stock of sugar. But in the abnormal hypoglycemic, and to some extent in the normal person who is sugar-starved, we see an intense irritability. Such persons have a tendency to fly off into a rage at the slightest provocation, and they are irritable at work. Nothing seems to satisfy them—they are not dissatisfied with their work because of their own meticulousness, but rather because anything that comes into their range of vision either fails to stir up any kind of reaction or stirs up an angry one.

The individual who is chronically hypoglycemic, if the low blood sugar is serious, is unpleasant to deal with, not only because of his anger but also because of a birdlike alertness which is very irritating to people. The hypoglycemic frequently complains of bodily ailments because he is more likely to note them than the ordinary individual. A frequent accompaniment of lack of sugar in the system is the patient's awareness of palpitation of the heart, excessive and annoying sweating, and occasional pains in the head and abdomen.

In the matter of hypoglycemia psychological knowledge of a nutritional problem works in both directions. Hypoglycemia may occur in an individual because of complex personality characteristics. The condition occurs frequently in an ambitious, basically voluble type of person who, when he is thwarted, reacts with his whole body. Often this damming up of emotion and sweating occur during childhood and are the basic reasons for suspecting the hypoglycemia revealed in the patient's history when a thorough clinical study is made. On

the other hand, hypoglycemia expresses itself through psychological symptoms, and the psychiatrist in looking at the symptoms, carefully studying his patient, realizes that the cause of the symptoms may also be physiological.

FATIGUE

Many studies have been made on fatigue. Unfortunately most of them have been from the standpoint of how much work an individual can do under various conditions. These various test conditions seldom include the psychological specifications which are most important.

We are not yet clear as to whether there is such a thing as pure mental fatigue. We do know that when a person is tired, he has a sensation of tiredness and is well aware of his incapacity to go on doing either mental or physical work; this sensation in itself is a psychological phenomenon. There is no doubt that people who do not get sufficient foodstuffs of the various necessary types experience fatigue more easily than others. The day seems long to the stenographer who has had only a cup of coffee for breakfast and a soft drink and a couple of small sandwiches for lunch.

It is interesting to note that when the work day for Canadian government employees in Ottawa was lengthened shortly after the beginning of the second world war, many of the girls employed in government offices began to faint either late in the morning or in the middle of the afternoon. Some of them believed it was necessary to hurry to work without breakfast. The wisdom of getting up a little earlier to eat sufficient food was never brought home to them. These girls fainted in the morning. The second group fainted in the afternoon because they had had a skimpy lunch so that they could go out and shop, their reason being that they had to shop during the noon hour in as much as the stores were closed at the end of the working day.

It has always seemed a very wise policy, to industrialists who were farseeing, to serve snacks at two-hour intervals in their plants. Unfortunately this practice has not gone as far as it should have. The English custom of having afternoon tea seems to give an extra psychological stimulus to the worker, supplying him with needed carbohydrates to replace those burned in a day's work, and also giving him a moment of rest to enable his tissues to restore themselves.

Almost every type of deficiency has fatigue as one of its symptoms. Protein deficiency is almost always characterized by early fatiguability on the part of workers. Lack of thiamine, nicotinic acid, and ascorbic acid all seem to make the vitamin-deficient person more likely to fall down on his job. The prescription of extra vitamins for such people seems in many instances to act as a tonic. Some fat-deficient persons fatigue easily if they also lack carbohydrates, but in a long morning's work the carbohydrate is burned before the fat so that if there is no fat reserve these workers are hungry and think they are tired; their energy output is down because they have no fuel to burn except that which they can get from their own tissues.

Our knowledge of the effect of food deficiencies on the personality is growing rapidly. In general, this conclusion must be drawn: deficiencies are important from a psychological angle, and the correction of such deficiencies produces excellent results from time to time. Unfortunately, however, we know no foodstuff as yet which, when added to a normal diet, will in itself correct a deficient personality.

X

Educating the Food Consumer

PERHAPS much more energy has been spent by scientists in finding out what was wrong with people's diets than in discovering ways to correct the deficiencies. This relation is in keeping with the basic concept of modern scientific medicine —that we should try to diagnose the disorder and find out how it is caused before we treat it. The intention is to remove the cause and after that, if possible, to attack the disorder in such a way that the effect of the cause will be completely neutralized.

Since there is no single cause of poor nutrition, as there is of some physical diseases such as malaria, the attack has to be more widespread, and it is here that educational psychology and clinical dietetics find an opportunity for their application.

The nutritionist has tried for decades to apply the knowledge of correct feeding to individual cases. Most of those who have been brought before the clinic dietitian in the past have been those who have shown definite dietary abnormalities. They have largely been those suffering from physical disease requiring diet therapy to improve their condition. These have been the primary cases who have been able to benefit directly by the dietitian's knowledge of what should be eaten.

During the economic depression, experts with knowledge of food budgeting and prescription of family diets were called into activity because families on relief and government-project workers had to learn how to use their small amounts of money for the best possible balanced diet. From data gathered in the extensive physical examination of our population for

the drafts of two wars and from information that the visiting housekeepers and dietitians were able to ascertain, we learned the rather low level of the general citizens' knowledge of correct ways of feeding themselves.

When the probability became very marked that we would be involved in the second world war, when men were being drafted, when lend-lease had already come into being, the need for better-planned nutrition of the country became acute. But during the quarter-century between the wars strong efforts had been made to improve the nation's health by every possible means, including the correction of bad food habits and the encouragement of good supplementary feeding. During this quarter-century of work in educating the public, certain methods have proved their value. Others remain doubtful and still others seem to have had little effect upon the community at large.

In evaluating the success or failure of educational methods in correcting food habits, there are certain features known to psychologists but apparently ignored by nutritionists which might well be brought into full daylight. The first is that the preparation and planning of meals still remains a woman's prerogative—that attempts to educate men have but limited value. It is possible, of course, to encourage a man to eat a better-balanced diet through various techniques when the food is set before him in his plant restaurant or elsewhere. Meal bonuses can be given in the form of salads or extra dishes so that the man will feel he is getting more for his money. Such techniques can be used, but these are not strictly educational and only have application for the moment and for the local eating place.

Approach to the woman of the family is even more difficult. Dietitians and the biochemists who find out the facts for the dietitians are usually very well educated. They must be college graduates; usually they have higher degrees or other training,

so they tend to evaluate the educational approach by the way they visualize the responses of their friends of like background. They fail, therefore, to realize that the majority of our housewives, both urban and rural, have trouble in finding time to sit down and read. Some of them are illiterate. Others who are not technically illiterate have trouble reading above the third- or fourth-grade level. Still others, although their reading capacity has been brought up to a higher level, have specific reading disabilities which make them disinclined to read because reading is an uncomfortable experience.

It may readily be seen that we cannot count too much on newspaper campaigns. The handing out of leaflets and brochures, and even the posting of placards with any great amount of printing on them, cannot be considered the best technique.

The Committee on Food Habits of the National Research Council has done extensive and intensive work in analyzing food consumption and types of foods eaten by various types of people, and considerable thought has been given to the problem of educating the American people. One of the projects sponsored by this committee was an attempt to determine the best technique for introducing a new food. The experimenters tried their plans on two groups of similar background. One was informed by lectures about new articles of diet; the other one was indoctrinated by person-to-person leadership. Group discussion leaders attempted to make those in the group aware of the possibilities and potentialities of the new food so that they could decide of their own accord to use it.

It was found in the long run that the personal contact of the discussion leader was far superior to the lecture method. This fact is very striking, although not unexpected, for it dramatically points out that a great deal of the nutritional education work has been relatively pointless and perhaps, to some extent at least, squandered.

We have often wondered, but have no source of exact in-

formation, how much influence the radio has. Certainly few cases coming through a domestic-relations clinic admit having heard of any recipes or food instructions over the radio.

By and large, the most effective ways of teaching the essentials of good nutrition lie in personal contacts. The Victory Aides and Block Leaders who represent various plans of getting information by word of mouth to the population as a whole seem to offer great possibilities in nutritional education. At the time of writing no systematic plan has been given any publicity.

The most common form of nutrition education has been the use of the poster. Stores, schools, public agencies, and clinics have all been the recipients of generous doses of graphic arts. Unfortunately, at the same time the posters come out encouraging one to eat more meat, meat prices have gone up. Diet posters have had to compete with safety-first placards, fire-prevention-week signs, and during the War, with masses of Treasury, Labor, and other governmental productions. The American public is definitely poster-fatigued. If one were to ask a casual acquaintance what posters he passed within the past hour, he undoubtedly would remember few or none of them.

Undoubtedly the ideal time to teach nutrition is while people are eating, and a plan which might well be developed in the future would be the instruction of young women on nutrition in an entertaining way during their meals. After all, they are to be the future housewives of America.

Combinations of various plans seem to be effective. Perhaps psychologically the most interesting of these has been the Mothers' Health Organization of the lower east side in New York. Dr. Frank Calderone was chairman of the Executive Committee of this organization, and while professional psychologists were not involved in the plans so far as we know, the job could not have been done more effectively by a group of

professionals. From nothing, Dr. Calderone built up an organization of 71,000 mothers who were not just names in lists but were actually participating in a program for improving their knowledge of nutrition.

According to Dr. Calderone, the project started with a group of representatives of various social agencies who were brought together to discuss the matter of improving the nutrition of the people in the lower east side. They met, agreed that it would be a good idea to have a nutritional program, and that was as far as things went. The aim of the project was to organize the mothers of the community into units which would facilitate the carrying on of projects, and it was also expected to coordinate the various agencies, such as settlement houses, nurseries, libraries, churches, and schools.

A new plan was then tried: each agency appointed a coordinator to select "key mothers." These mothers were supposedly dynamic people in the agency and they were to get other mothers to join the project. Eventually there were 71,000 participants. The getting of so many participants was very well done in as much as it was the result of personal contact with the chairman of the Executive Committee by the agency leader, the contact of the leaders with key mothers, and the psychological selection of key mothers who could bring others into the project. The feature of great interest to nutritionists and psychologists is the means used to stimulate the nutritional program. It was found at the beginning that settlement houses were interested and would co-operate but had no dynamic projects to suggest. It was also found that the organizations were acting in a vacuum until they were stimulated. This project is a classic example of the use of excellent psychological techniques. When it was found that results were not forthcoming and that no organization would be started merely because it was a good idea, the *use of authority* was brought into play.

The use of authority functions in two ways. One is the tendency among people, which increases their suggestibility, to do what they think important people believe they should do. This tendency comes in part from the fact that they identify the authority of experts with the parent in their family who laid down the rules of conduct. The second channel of influence is the principle of ego satisfaction. There are very few individuals who can resist telling about their associations with well-known people. (Witness the collections of autographs which adolescents secure from well-known picture stars.)

The Mothers' Health Organization used the strongest authority possible. Since the president of the United States is too busy and has certain restrictions as to his activities, he could not be gotten to head this small local group. Fortunately, Mrs. Roosevelt is a strong endorser of any procedure which will aid in national health, and was willing to lend her name, and her endorsement was a useful stimulant for the organization's activities.

A group of sponsors was organized, including the deans of the medical schools, the health commissioner, the commissioner of the fire department, commissioner of the hospital, and others whose positions in the New York community were sufficiently strong that those who were going to benefit by the program would feel in a way that these celebrities were interested in them. In addition, a Medical Advisory Board and a Nutrition Board, consisting of local celebrities in the fields of medicine and dietetics, were organized so that the authority of the experts would make the potential members of the organization feel that they were getting the very best kind of medical advice at a low cost.

Another psychological principle that was used to heighten the interest of the mothers in health measures was *dramatization of material.* (By skillful use of language or procedures, the interest of the subject is so stimulated that the thing to be

taught rises above all of the things that are interesting him at the time. For instance, a person seeing an exciting moving picture of lifesaving, with artificial respiration, with important actors performing, will remember more about this subject than he would retain after reading a dry presentation of the same information.) Newspaper publicity heightened the dramatization when a sumptuous meal was served in the Waldorf-Astoria which cost considerably under a half dollar and proved that a tasty meal can be prepared for a small sum.

It is most difficult to bring into play the *feeling of participation*. This feeling was conveyed through the use of buttons for the mothers and the children to wear. In order to get these buttons, it was necessary for the mothers to register and to pledge co-operation. It was also necessary for the children to agree to take home the material to the mothers. In this way, pressure was brought to bear upon the parents, both directly and through the children.

Several other useful techniques were used, such as the handing out of leaflets containing recipes to be tried during the period of activity. It was necessary to use these recipes in order to carry out the pledge involved in belonging to the Mothers' Health Organization. Lectures were given, but to differentiate them from all other lectures in the neighborhood and in order to make them stand out, it was necessary for the mother to get tickets. Only those who signed and had tickets could get inside the hall. This plan was clever psychology for it gave the mothers who belonged to the organization a certain feeling of superiority. Since there was no charge for tickets and anybody could join the organization who wished, it stimulated the desire to participate.

There have been other campaigns and programs using psychological techniques. One of the best which has been used in industry is that developed by the Westinghouse Electric and Manufacturing Company, under the direction of Julia Kiene.

In this, the club was organized for the wives and mothers of war workers, and monthly dramatic demonstrations were held by trained home economists. Almost every type of visual education was used. The Westinghouse Company provided the literature and motion pictures at cost; they also supplied, without charge, the field personnel to train utility headquarters workers. The latter were to develop menus, recipes, and meal-planning guides. Co-operating electric utility companies provided the time of their home economists for the monthly meetings, so that the whole procedure was carried out not only in the Westinghouse plants but also in a number of others.

The monthly meeting was topical, and the interest of the homemaker was always aroused. When there was a shortage of meat, the topic was "Meeting Meat Shortages." There were signs as well as kitchen utensils on the stage, and recipes were actually prepared in the presence of the audience. At the end of the meeting there was an open forum, and the monthly booklet was distributed to all club members. Various pages of the booklet were explained to the audience. This technique had an additional advantage of keeping the interest of the club up from month to month without being so time-consuming that interest would drop after a few months of exciting club experience. The audience could see its financial advantage in following out the recommendations of the nutritionists, who in turn were able to increase their hearers' knowledge of nutrition. Finally, the open forum gave the audience the feeling of participation which was necessary to keep its interest up and also it gave to those who participated the feeling that they had close personal contact with the "celebrity," that is, the instructor. This feeling is one which cannot be gotten from a lecture alone.

SOME GENERAL RULES FOR STIMULATING A BETTER KNOWLEDGE OF NUTRITION

1. The person who is to be helped must have the feeling of an interest in him or in his health as an individual. This requirement can be accomplished by personal interview, by discussions of personal problems with the nutritionist or instructor, or by audience participation. Round tables are also effective.

2. Any material which is prepared in written or spoken form must have novelty. It is probably unwise to use horror pictures or lurid bad examples. The presentation should have in it activity elements which fit in with the participant's own personality as well as drama.

3. The opportunity to take part and feel a constructive interest in the program is superior to dramatic presentation no matter how well the latter may be done. Prizes, presents, awards, medals, certificates, and other outward evidences of advancement which will give the participant ego satisfaction have a definite place in the nutritional program.

4. If possible, the material should be presented as near as possible to the time it can be used. It is ridiculous to hand out menus to workmen as they go into work. But to hand menus to a woman who is entering a grocery store to buy the food for the evening dinner has vast potentialities.

5. The material should be safeguarded. No organization should endorse an instructor on foods unless it is satisfied that such a person has adequate technical qualifications and that the food instruction is in accordance with the plans laid down by such conservative sources as national or state governments or boards pertaining to the various food industries.

6. Too much should not be expected of any single techniqu Combinations of techniques with novelty will produce results. The business of educating individuals or even small groups of

people is slow at best; the work of revising deep-seated and ingrained attitudes and stimulating interest in the technical side of foods for the whole nation or national subdivisions must be even slower.

THE FUTURE

As educators and clinical psychologists begin to approach the problem of carrying over to the mass of our citizens the knowledge necessary for properly balanced diets, new psychological aspects of nutrition will constantly come up. Reaching each and every mother is probably the most serious problem that still faces those who must promote through efficient psychological methods an adequate knowledge of food preparation and menu making. During the first few years of the 1940's several tentative organizations such as Victory Aides and Block Leaders rose hesitantly above the horizon, but they soon disappeared. Yet they offer the possibility of bringing to each and every homemaker in the United States a basic knowledge of nutrition, helpful recipes, and meals planned so as to use low-cost foods when they are in season—at the same time offering each family the diets that its position demands.

We can only become a well-fed nation when every homemaker and perhaps every citizen knows what he needs in the way of foods each day, what types of foods are most compatible with health, and, in the case of the homemaker particularly, what techniques can be used to deal with children in order to lead them to eat satisfactorily and enjoy their food. Psychological methods needed to carry this knowledge intimately into the minds of the people are already at hand. The nation needs only to encourage careful scientific studies in psychodietetics and child guidance to bring about a major improvement in the eating habits of large numbers of our now inadequately nourished American people.

The psychological problems which up to now have been

found to be important in teaching and inducing people to eat what is good for them will be solved in part in the future by those who process, distribute, and sell food. The packaging of foodstuffs has already produced single dishes which offer advantages because of their simplicity, their tastefulness, and the potentiality for increasing the balance of hidden nutriments in the diet. It is not too much to expect that food processing and packaging will reduce some of the problems of the dietitian, institution manager, and housewife. Meals of proper balance, perhaps containing all of the usually neglected hidden nutriments, can be frozen or packaged as units. There is a possibility that central commissaries may be set up in some communities to provide meals planned by nutritionists and already prepared, which need only be warmed up in order to be served. Such services will shift the stress on psychodietetics from the ultimate consumer, such as the housewife, to the company which offers the service. The meals must be enticing, must cater to fads, fashions, and fancies. By working with psychologists, such services, if used consistently, should tend to level out the peaks and valleys in the family diet.

While the psychologist is entitled to expect the nutritionist to use psychological facts in the food clinic, the nutritionist must demand of the psychiatrist that he have an adequate knowledge of the science of nutrition. Just as fast as the psychologist and nutritionist develop a common interest in the problem of feeding, just so quickly will poor feeding be rectified in the country as a whole—for the economic problem, at least as far as food balance is concerned, can be kept under control and may in the future disappear.

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